

NIGERIA LNG APTITUDE TEST

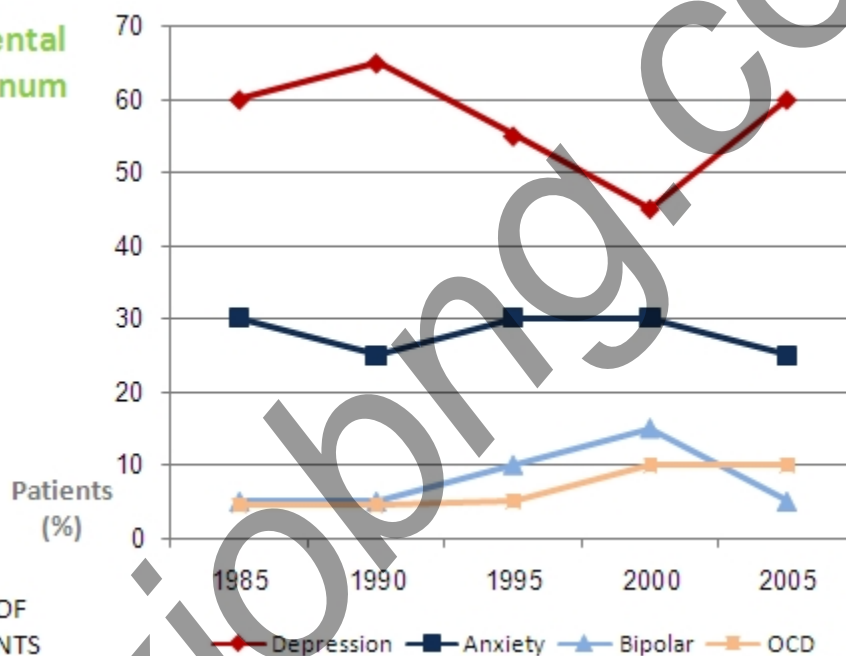
PAST QUESTIONS AND SOLUTIONS

Quantitative Reasoning - (20 minutes)

TEST ONE:

There are 20 questions in this test and you should answer as many as you can.

Prevalance of Mental Disorders per Annum



Question 1

How many patients from this sample have suffered from depression in 1995?

- A. 1150 patients
- B. 1155 patients
- C. 1375 patients
- D. 1455 patients
- E. 1535 patients

Correct answer: C

Explanation

55% of the 1995 sample suffered from depression. The sample consists of 2500 participants ?
 $0.55 \times 2500 = 1,375$ patients suffered from depression in 1995.

Question 2

From the sample, how many less patients suffered from Bipolar disorder between 2000 and 2005?

- A. 225 patients
- B. 250 patients
- C. 350 patients
- D. 375 patients
- E. 400 patients

Correct answer: B

Explanation

In 2000, 15% of the sample (2500) suffered from Bipolar disorder = $2500 \times 0.15 = 375$ patients.
In 2005, 5% of the sample (2500) suffered from Bipolar disorder = $2500 \times 0.05 = 125$ patients.
 $375 - 125 = 250$ less patients suffered from Bipolar disorder in 2005 than in 2000.

An additional way to do the math is simply look at the graph and note the difference in percentages between 2005 and 2000 which is 10% (15-5).
10% of the entire sample (2500) is 250 and we can calculate this without making use of a calculator.

Question 3

A new revolutionary medication is introduced in 2005. This medication immediately alleviates symptoms for 20% of the patients suffering from the 4 mental disorders presented here. Assuming that, starting from 2005, such a treatment will be given to the original sample every 5 years with an identical success rate in percentages, how many patients comprising the sample will remain mentally ill by the year 2020?

- A. 1,024 Patients
- B. 1,048 Patients
- C. 1,280 Patients
- D. 1,000 Patients
- E. 2,000 Patients

Correct answer: A

Explanation

The medication is introduced in 2005 reducing mental illness for a sample of 2500 by 20% = $0.2 \times 2500 = 500$ cured patients and a total of 2000 ($2500 - 500$) patients remain ill.

In 2010 another 20% will be cured from the remaining group of mentally ill people in the original sample (2000) = $0.2 \times 2000 = 400$ additional patients cured and a total of 1600 ($2000 - 400$) remaining ill.

In 2015 another 20% will be cured from a remaining sample of 1600 = $0.2 \times 1600 = 320$ additional patients cured and a total of 1280 ($1600 - 320$) remaining ill.

In 2020 another 20% will be cured from a remaining sample of 1280 = $0.2 \times 1280 = 256$ additional patients cured and a total of 1024 ($1280 - 256$) patients still remain ill.

Question 4

In the following 15 years it is expected that the trends seen from 2000 onwards for Anxiety and OCD will continue at the same rate. What will be the expected ratio between the two in the year 2020?

- A. 2:5
- B. 1:2
- C. 1:3
- D. 2:3
- E. 1:1

Correct answer: E

Explanation

Between 2000 to 2005 there was a reduction of 5% from 30% to 25% of patients suffering from Anxiety.

In the same time frame the prevalence of OCD remained 10%.

Assuming this trend continues, OCD will remain constant at 10% while Anxiety is expected to loose 5% every 5 years. i.e., drop from 25% in 2005, to 20% in 2010, to 15% in 2015, and finally to 10% in 2020.

The ratio of Anxiety to OCD in 2020 assuming the present trend continues will be 1:1 (10%:10%).

Question 5

Rate the ratio of Depression to OCD patients in the sample from largest to smallest by years.

- A. 1985, 1990, 1995, 2000, 2005
- B. 1990, 1985, 1995, 2005, 2000
- C. 2000, 2005, 1995, 1985, 1990
- D. 1990, 2000, 1995, 1985, 2005
- E. 2000, 2005, 1985, 1990, 1995

Correct answer: B

Explanation

The Depression to OCD ratio in 1985 = 60% : 5% = 12 : 1

The Depression to OCD ratio in 1990 = 65% : 5% = 13 : 1

The Depression to OCD ratio in 1995 = 55% : 5% = 11 : 1

The Depression to OCD ratio in 2000 = 45% : 10% = 4.5 : 1 = 9 : 2

The Depression to OCD ratio in 2005 = 60% : 10% = 6 : 1

Therefore, putting the ratio in order from largest to smallest by years = 1990, 1985, 1995, 2005, 2000

Prices for specific advertizing products (in British pounds)

Advertizing company Item type & quantity	Big-time	HIP	Master ad	Brand mad
Pens (500)	850	612	497	550
Lighters (100)	2140	1510	1930	1140
Match box(1000)	800	1000	500	700
Shirts (50)	1920	1640	1310	1127
Postcards (500)	407	312	243	217

- 1.BrandMad offer 10% discount on any purchase above 1000 pounds.
- 2.HIP offer 20 free match boxes for each 1000 lighters.
- 3.Big-time offer 15% discounts on annual contracts.

Question 6

A business has been ordering 50 shirts through Master Ad on a monthly basis for the past year. What would be the percent change of their annual order if they are to start working with Big-time starting next year?

- A. 2.6
- B. 24.58
- C. 28.47
- D. 42.65
- E. 46.56

Correct answer: A

Explanation

Since we are dealing with equal time periods, there is no need to take into calculation the number of months! Simply look for the price difference and the fact that BrandMad offers 15% percent off annual campaigns $[(1920 \times 0.85) - 1310] / 1310 = 0.2458 = 24.58\%$.

A quicker way to calculate percentages is:

$$(1920 \times 0.85 / 1310) - 1 = 0.2458 = 25.58\%$$

Question 7

If brand mad were to increase their prices in 10%, what would be the net change in price of an order that includes 1000 pens, 2000 match boxes, and 300 shirts?

- A. 926.2
- B. 833.58
- C. 888.79
- D. 907.51
- E. 1014

Correct answer: B

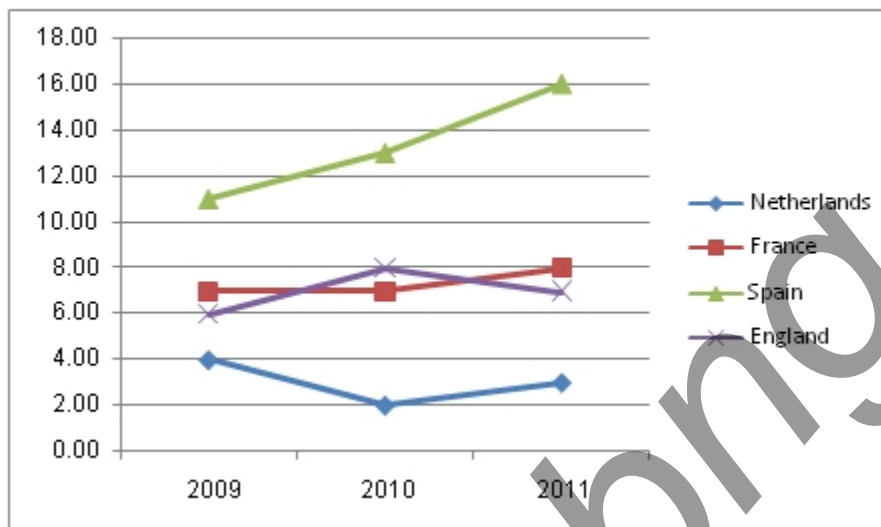
Explanation

To speed up the calculations, look for operations which repeat themselves.

In this case, there is no need in multiplying each product by 1.1 which represents the 10% increase, rather multiply the whole expression by 1.1 once. Then, multiply the result by 0.9, since it is mentioned that a 10% discount is offered for above 1000 pounds purchases.

$$\{ 1.1 \times [(6 \times 1127) + (2 \times 700) + (2 \times 550)] \} - [(6 \times 1127) + (2 \times 700) + (2 \times 550)] = 926.5$$
$$926.5 \times 0.9 = 833.58$$

Unemployment Rate in European Countries (%)



Question 8

In 2011, Spain's population is 46 million, and France's population is 65 million. In percent, how many more unemployed are in Spain?

- A. 70.6
- B. 41.5
- C. 35.3
- D. 28
- E. Cannot say

Correct answer: B

Explanation

$$(\text{Spain's unemployed}) / (\text{France's unemployed}) - 1:$$
$$(46,000,000 \times 0.16) / (65,000,000 \times 0.08) - 1 = 0.415 = 41.5\%$$

Question 9

In 2012, England's population is to grow by a factor of 1.5 compared to 2011, being 12 times bigger than Netherlands's. What is England's expected population size in 2012, in millions?

- A. 64
- B. 23
- C. 84
- D. 77
- E. Cannot say

Correct answer: E

Explanation

Given no real numbers on population sizes, this question cannot be solved. Answer is Cannot say.

Question 10

In 2009, there were 667,284 unemployed in Netherlands, whose population was 27.53% of the UK for that year. With a fixed annual population increase of 0.639%, approximately how many unemployed are in the UK in 2011?

- A. 4,296,108
- B. 4,801,138
- C. 8,511,287
- D. 6,987,322
- E. 6,895,245

Correct answer: A

Explanation

Netherlands population 2009: $667,284 / 0.04 = 16,682,100$

UK population 2009: $16,682,100 / 0.2753 = 60,596,077$

UK population 2011: $60,596,077 * 1.006392 = 61,372,968$

UK unemployed 2011: $61,372,968 * 0.07 = 4296108$

Departmental Contributions to marginal profits, SE Investments LTD
(in millions of Euros)

	2008	2009	2010
Affiliates	570	592	610
Sales	410	381	406
Foreign investments	82	-34	112
Consultancy	32	49	58
Sports	77	85	62
Others	-12	-25	5

Question 11 (id: 12401)

Approximately what is the percent increase of Sports department's profit contribution between 2008 and 2009?

- A. 15.6
- B. 10.4
- C. 11.2
- D. 5.7
- E. 17.7

Correct answer: B

Explanation

A simple percentage calculation.

Either: $(85/77) - 1 = 0.1038 = 10.38\%$

Or $(77-85)/77 = 0.1038 = 10.38\%$

Question 12

What is the sum of profits gained through foreign investments + affiliates departments, in billions of Euros, in 2008-2009?

- A. 1.278
- B. 0.897
- C. 1.21
- D. 1.932
- E. 2.000

Correct answer: C

Explanation

Adding the numbers gives:

$570 + 592 + 82 - 34 = 1210$ million, which is 1.21 billion

Question 13

In 2011, foreign investments profits are expected to increase by 10%, and sports are to increase by 7%. What would be the difference between the two departments, in millions of Euros?

- A. 81.24
- B. 56.86
- C. 79.36
- D. 42.5
- E. 58

Correct answer: B

Explanation

$(1.1 * 112) - (1.07 * 62) = 56.86$

Question 14

What percent does the consultancy department's profit increase comprise of the total increase in profits between 2009 and 2010?

- A. 5.314
- B. 4.39
- C. 7.36
- D. 4.59
- E. 8.477

Correct answer: B

Explanation

We need the relative share of consultancy (58-49 = 9 million), out of the whole increase:
 $9 / [(610-592) + (406-381) + (112+34) + (58-49) + (62-85) + (5+25)] * 100 = 4.39\%$

Question 15

What is the increase/decrease absolute profit ratio between affiliates and consultancy departments to the remaining departments, between the years 2008 and 2009?

- A. 11:27
- B. 24:96
- C. 39:166
- D. 1:4
- E. 13:50

Correct answer: C

Explanation

The ratio is between two departments and the rest:

Affiliates and consultancy: $[(592-570) + (49-32)]$

The rest: $[(410-381) + (82+34) + (85-77) + (25-12)]$

Thus:

$[(592 - 570) + (49-32)] : [(410-381) + (82+34) + (85-77) + (25-12)] = 39:166$



Question 17

A leading company takes over the Aperitif production category, creating a monopoly which increases prices of Aperitif by 15% and digestif prices by 20%. What percent change to the total market value does this activity inflict?

- A. 4.45
- B. 27.59
- C. 3.27
- D. 31.2
- E. 5.26

Correct answer:

Explanation

Here again, we don't have to multiply each alcohol branch by 6200, we can multiply them all once, as following:

$$\{6200 * [(1.2 * 0.11 + 1.15 * 0.15) - (0.11 + 0.15)]\} = 275.9 \quad 275.9 / 6200 = 4.45\%$$

Question 18

Relative market distribution did not change between 2010 and 2011, and whiskey sales were then worth 479 million dollars. The current market value of beer is what percent of the total market value of Alcohol in 2010?

- A. 22.78
- B. 7.72
- C. 15.65
- D. 19.64
- E. 10.65

Correct answer:

Explanation

Total market value in 2010 = $(479/0.08) = 5987.5$ million dollars.

2011 Beer market value = $0.22 \times 6200 = 1364$ million dollars.

$1364/5987.5 = 0.227 = 22.78\%$

Inflation Protected Debt Payments of Company X
(in millions of dollars)

Date of payment	Nominal cash flow	Present value (31.12.2010)
31.12.2011	8000	7272.73
31.12.2012	8240	6809.92
31.12.2013	8487.2	6376.56
31.12.2014	8741.82	5970.78

Question 19

Which year shows the highest inflation rate?

- A. 1-2
- B. 3-4
- C. 2-3
- D. 2-3 and 3-4
- E. None of the above

Correct answer: E

Explanation

Inflation in this case does not change. Inflation is included in the nominal cash flow. Between each two years the inflation is always 3%, e.g.

$(8240/8000) - 1 = 0.03$

Question 20 (id: 12410)

What interest rate was used to find the present value of payments in year 3, in percents?

- A. 10
- B. 46
- C. 33
- D. 21
- E. 19

Correct answer: C

Explanation

$(8487.2/6376.56) - 1 = 0.33 = 33\%$

TEST TWO:

There are 20 questions in this test and you should answer as many as you can.

2005 Results of the 'Daily Magic' Newspaper Global Delivery

	Successfully Delivered Newspapers Per Courier (excluding lost) Per Day	Per cent of Newspaper Lost During Delivery	Number of Couriers Working Annually
London	12,504	5%	758
Sydney	7,704	11%	321
Paris	8,007	13%	569
New York	15,600	6%	358
Milan	3,069	8%	259

Question 1

How much does it cost to deliver a newspaper successfully in Sydney (excluding lost papers)?

- A. \$1.8
- B. \$2.0
- C. \$2.2
- D. \$2.4
- E. Cannot Say

Correct answer: E

Explanation

There is no information about newspaper prices, therefore we can't figure out the answer based on the existing data

Question 2

What is the ratio of successfully delivered newspapers to lost newspapers in London?

- A. 1:19
- B. 20:1
- C. 1:20
- D. 19:1
- E. Cannot Say

Correct answer: D

Explanation

Out of a total of 100% of newspapers that leave the factory, 5% are lost. This means that for every 100 newspapers, 95 papers are delivered and five newspapers are lost.

Dividing 95 by 5 = 19. The ratio of successfully delivered newspapers to lost newspapers in London is 19:1.

Question 3

Estimate how many couriers from Sydney would have been needed to deliver the same number of newspapers as in London.

- A. 512 Couriers
- B. 513 Couriers
- C. 517 Couriers
- D. 521 Couriers
- E. 523 Couriers

Correct answer: D

Explanation

In Sydney, there are 321 couriers delivering 7,704 newspapers.

$7704 / 321 = 24$ newspapers per courier

In London, 12,504 newspapers are delivered successfully.

Dividing the 12,504 by 24 gives us the number of couriers required for this task = $12,504 / 24 = 521$ couriers

Question 4

Estimate how many newspapers were lost during delivery in New York per day.

- A. 930
- B. 1000
- C. 1200
- D. 900
- E. 1500

Correct answer: B

Explanation

15,600 newspapers were successfully delivered in NY, excluding those that were lost.

We know that 6% of the total number of newspapers in New York are lost.

This means that 15,600 newspapers make up 94% of the total amount ($100 - 6 = 94$). So $(15,600 \times 6) / 94 = 995.74 = 1000$ (approx) newspapers are lost in New York every day.

Another method for calculating: $(15,600 \times 100) / 94 = 16,595.74$ (this is the total number of newspapers in New York per day).

The total number of newspaper minus the number of newspapers successfully delivered is the number of newspapers lost per day: $16,595.74 - 15,600 = 995.74$

Question 5

What would Sydney's lost rate have to be to match the number of successful deliveries in Paris (excluding lost papers) per courier per day?

- A. 5%
- B. 7.5%
- C. 10%
- D. 12.5%
- E. 15%

Correct answer: B

Explanation

With a loss rate of 11%, the 7,704 newspapers that are successfully delivered in Sydney make up 89% of the total newspapers delivered (100% - 11%).

The total number of deliveries in Sydney (including lost papers) is $(7,704 \div 89) = 8,656$

In Paris, 8,007 newspapers are delivered successfully.

Calculate the percentage we have to deduct from 8,656 to receive 8,007. (The total number of successfully delivered newspapers in Paris $\times 100$) / the total number of newspapers delivered in Sydney (including lost papers) = $(8007 \times 100) / 8656 = 92.5\%$ of Sydney's newspapers have to be delivered successfully to match Paris's successful delivery rate.

The rate of lost papers is therefore $100 - 92.5 = 7.5\%$ (in comparison with the current existing 11% lost paper rate)

Unemployment in 2006 in UK and Australia

	UK		Australia	
	N	%	N	%
Healthcare	122000	2.97	54000	4.0
Tourism & Hospitality	168000	4.09	65000	4.8
IT	82000	2.04	119000	8.7
Education	54000	1.3	87000	6.4
Construction	79000	1.9	26000	1.9
Other	3605000	87.7	1009000	74.2
Total	4110000	100	1360000	100

Question 6

Which sector had the lowest unemployment in 2006 in the UK and Australia combined?

- A. Healthcare
- B. Tourism & Hospitality
- C. IT
- D. Education
- E. Construction

Correct answer: E

Explanation

We must add the unemployment figures for each sector in the UK and Australia and the smallest number will indicate the sector with the lowest unemployment. In this particular case we may also look at the actual percentages of the unemployment rate to give us an indication.

Healthcare = 122000 + 54000 = 176000

Tourism & Hospitality = 168000 + 65000 = 233000

IT = 82000 + 119000 = 201000

Education = 54000 + 87000 = 141000

Construction = 79000 + 26000 = 105000

Question 7

Which sector had the greatest ratio of Australian to UK unemployed in 2006?

- A. Tourism & Hospitality
- B. IT
- C. Education
- D. Construction
- E. Other

Correct answer: C

Explanation

The quickest way to solve this question is to look at the data before beginning any calculations.

The question asks regarding the ratio of Australian to UK unemployed. This means that the higher the Australian number and the smaller the UK number the greater the ratio. The Education sector has the highest ratio = $87000 : 54000 = 1.61$.

Question

Which sector had a ratio of the number of UK to Australian unemployed of approximately 3:1?

- A. Tourism & Hospitality
- B. IT
- C. Education
- D. Construction
- E. Other

Correct answer: D

Explanation

At a glance we can spot the only two sectors that have a UK to Australian ratio that is around 3:1 are the Construction and Other sectors.

The detailed calculation shows:

Construction UK : Construction Australia = $79000 : 26000 = 3.03 : 1$

Other UK : Other Australia = $3605000 : 1009000 = 3.57$

The Construction sector has an approximate UK to Australian ratio of 3:1

Question 9

Approximately what proportion of all IT unemployed in 2006 were British?

- A. 40
- B. 45
- C. 50
- D. 55
- E. 60

Correct answer: A

Explanation

The proportion of all IT unemployed in 2006 that were British = (IT Unemployed in UK / (IT Unemployed in UK + IT unemployed in Australia)) x 100
 $(82,000 / (82,000 + 119,000)) \times 100 = 40.8\%$

Another way to calculate: $82,000 + 119,000 = 201,000$ $(82,000/201,000) \times 100 = 40.8\%$

Question 10

If the total number of unemployed in the UK reflects approximately 6.8% of the total population of Italy, what is the population of Italy?

- A. 60 million
- B. 55 million
- C. 6 million
- D. 600 million
- E. Cannot Say

Correct answer: A

Explanation

The population of Italy = (Total number of unemployed in UK x 100) / 6.8
Population of Italy = $(4110000 \times 100) / 6.8 = 60.4$ Million

**National Surveyors
Mileage of Surveyors**

	Surveyor 1	Surveyor 2
Month 1	2675	2986
Month 2	3256	2742
Month 3	1890	2250
Month 4	3892	3425
Month 5	3401	4152

Question 11

Approximately how many more miles did Surveyor 2 travel during the first three months than Surveyor 1 did?

- A. 325
- B. 440
- C. 140
- D. 160
- E. 320

Correct answer: D

Explanation

We first add the number of miles each of the surveyors traveled in the first three months.

Surveyor 1 = $2675 + 3256 + 1890 = 7821$

Surveyor 2 = $2986 + 2742 + 2250 = 7978$

We then subtract the number of miles Surveyor 1 travelled from the number of miles Surveyor 2 travelled.

$7978 - 7821 = 157$ miles? 160 miles

Question 12

Between which two months was there the smallest proportional increase or decrease in Surveyor's 1 mileage in comparison to the previous month?

- A. Months 1 and 2
- B. Months 2 and 3
- C. Months 3 and 4
- D. Months 4 and 5
- E. Cannot say

Correct answer: D

Explanation

In order to determine the rate of increase or decrease between two months we must first find the difference between the mileage traveled in each month and then divide the difference by the previous months' mileage to obtain the proportion.

In this case the smallest proportional decrease in Surveyors 1 mileage was between month 4 and 5 = $3892 - 3401 = 491$ miles. $(491 / 3892) \times 100 = 12.6\%$

Question 13

If Surveyor 2 received 8 cents per mile more than Surveyor 1 and Surveyor 1 received 756 Euros for month 3, how much did Surveyor 2 receive in that same month?

- A. 1080 Cents
- B. 900 Cents
- C. 1890 Euros
- D. 2250 Cents
- E. 1080 Euros

Correct answer: E

Explanation

The first step is to determine how many cents per mile Surveyor 1 received.

The calculation proposed:

Amount received / amount traveled in month 3 = $756 / 1890 = 0.4$ Euros per mile = 40 cents per mile.

Surveyor 2 received 8 cents per mile more than Surveyor 1 = $40 + 8 = 48$ cents per mile.

In month 3 Surveyor 2 traveled 2250 miles. Therefore the amount he/she was due to receive was the amount of miles travelled multiplied by the number of cents per mile they receive = $2250 \times 48 = 108000$ cents = 1080 Euros

Question 14

If Surveyor 1's car uses 20% more fuel than Surveyor 2, in which month was their combined consumption the highest?

- A. Month 1
- B. Month 2
- C. Month 3
- D. Month 4
- E. Month 5

Correct answer: E

Explanation

Let's assume that for each mile travelled Surveyor 2 uses 1 unit of petrol. This would mean that Surveyor 1 will use 1 unit and an additional 20% for every mile traveled or in other words 1.2 units of petrol for every mile traveled.

We must now calculate the combined use of petrol in every month: Month 1 = $2675 \times 1.2 + 2986 = 6196$ units

Month 2 = $3256 \times 1.2 + 2742 = 6649.2$ units

Month 3 = $1890 \times 1.2 + 2250 = 4518$ units

Month 4 = $3892 \times 1.2 + 3425 = 8095.4$ units

Month 5 = $3401 \times 1.2 + 4152 = 8233.2$ units

In Month 5 their combined consumption was the highest

Question 15

If Surveyor 2 receives 32 cents per mile and Surveyor 1 receives 28 cents per mile, how much more or less did Surveyor 1 receive in month 4?

- A. 624 Euros more
- B. 624 Euros less
- C. 6.24 Euros more
- D. 6.24 Euros less
- E. 62.4 Euros more

Correct answer: D

Explanation

The amount of miles Surveyor 1 traveled in month 4 is 3892.

Surveyor 1 received $3892 \times 28 = 108976$ cents = 1089.76 Euros.

The amount of miles Surveyor 2 traveled in month 4 is 3425. Surveyor 2 received $3425 \times 32 = 109600$ cents = 1096.00 Euros.

$1089.76 - 1096.00 = -6.24$ Euros

Surveyor 1 received 6.24 Euros less than Surveyor 2 did.

Natural Resources Market Statistics

Products	No of employees (thousands)	Value of extracted produce (millions)	Market value (millions)	
			Asia	U.S.A
oil	2,572	\$7,568	\$487	\$1,574
copper	1,235	\$3,587	\$831	\$928
coal	957	\$3,456	\$728	\$1,375
uranium	1,542	\$6,875	\$427	\$3,208
silver	1,012	\$3,500	\$700	\$1,789

Question 16

Approximately, what percentage of overall extracted coal produce does U.S.A coal market comprise?

- A. 32
- B. 35
- C. 37
- D. 40
- E. 43

Correct answer: D

Explanation

The USA coal market is worth \$1,375 millions.

The overall extracted coal produce is \$3,456 millions.

Dividing the USA coal produce by the total value of extracted coal produce and multiplying the answer by 100 will provide the percentage required = $0.397 \times 100 = 39.7\% = 40\%$ (approx)

Question 17

Which product shows the largest ratio between the market value of the USA and Asia?

- A. Oil
- B. Copper
- C. Coal
- D. Uranium
- E. Silver

Correct answer: D

Explanation

The ratio can be calculated by roughly dividing the American market value by the Asian one .
In oils it is roughly 3:1 (1574/487), Copper 1:1, Coal: 2:1 (1375/728), Uranium 8:1(3208/427),
Silver 2.5:1(1789/700)

The largest ratio between the market value of the USA and Asia stands at 8:1 for Uranium

Question 18

Which product has the lowest value of extracted produce per employee?

- A. Oil
- B. Copper
- C. Coal
- D. Uranium
- E. Silver

Correct answer: B

Explanation

The value of extracted produce for each product divided by the number of associated employees will show the value of extracted produce per employee.

Oil : $7,568,000,000 / 2,572,000 = \2942 per employee.

Copper: $3,587,000,000 / 1,235,000 = \2904 per employee.

Coal: $3,456,000,000 / 957,000 = \3611 per employee.

Uranium: $6,875,000,000 / 1,542,000 = \4458 per employee.

Minerals: $3,500,000,000 / 1,012,000 = \3458 per employee.

In this case the lowest value of extracted product per employee is for Copper

Question 19

By how much does the value of extracted Silver per employee exceed that of Copper?

- A. \$35,789
- B. \$554,000
- C. \$75,258
- D. \$554
- E. \$150,000

Correct answer: D

Explanation

The value of extracted Silver per employee = $3,500,000,000 / 1,012,000 = \3458

The value of extracted Copper per employee = $3,587,000,000 / 1,235,000 = \2904

Deduct the first from the latter = $3458 - 2904 = \$554$

The value of extracted Silver is \$554 higher than the value of extracted Copper per employee.

Question 20

On average, how much market value in Asia would a Uranium employee create per week (52 weeks a year)?

- A. \$5.3
- B. \$5.5
- C. \$5.7
- D. \$5.9
- E. \$6.2

Correct answer: A

Explanation

The market value of Uranium in Asia is \$427,000,000.

This sum is divided by the number of Uranium employees (1,542,000) = $427,000,000 / 1,542,000 = \276.91 .

\$276.91 is the market value in Asia for extracted Uranium per employee per annum.

The question refers to a week therefore we divide the calculated sum (representing a year) by 52 = $276.91 / 52 = \$5.3$.

TEST THREE:

There are 20 questions in this test and you should answer as many as you can.

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	Successfully Delivered Newspapers Per Courier (excluding lost) Per Day	Per cent of Newspaper Lost During Delivery	Number of Couriers Working Annually
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Paris	8,007	13%	569
New York	15,600	6%	358
Milan	3,069	8%	259

Question 1

How much does it cost to deliver a newspaper successfully in Sydney (excluding lost papers)?

- A. \$1.8
- B. \$2.0
- C. \$2.2

- D. \$2.4
E. Cannot Say
Correct answer: E

Explanation

There is no information about newspaper prices, therefore we can't figure out the answer based on the existing data

Question 2

What is the ratio of successfully delivered newspapers to lost newspapers in London?

- A. 1:19
B. 20:1
C. 1:20
D. 19:1
E. Cannot Say
Correct answer: D

Explanation

Out of a total of 100% of newspapers that leave the factory, 5% are lost. This means that for every 100 newspapers, 95 papers are delivered and five newspapers are lost.

Dividing 95 by 5 = 19. The ratio of successfully delivered newspapers to lost newspapers in London is 19:1

Question 3

Estimate how many couriers from Sydney would have been needed to deliver the same number of newspapers as in London.

- A. 512 Couriers
B. 513 Couriers
C. 517 Couriers
D. 521 Couriers
E. 523 Couriers
Correct answer: D

Explanation

In Sydney, there are 321 couriers delivering 7,704 newspapers.

$7704 / 321 = 24$ newspapers per courier

In London, 12,504 newspapers are delivered successfully.

Dividing the 12,504 by 24 gives us the number of couriers required for this task = $12,504 / 24 = 521$ couriers

Question 4 (id: 12374)

Estimate how many newspapers were lost during delivery in New York per day.

- A. 930
- B. 1000
- C. 1200
- D. 900
- E. 1500

Correct answer: B

Explanation

15,600 newspapers were successfully delivered in NY, excluding those that were lost.
 We know that 6% of the total number of newspapers in New York are lost.
 This means that 15,600 newspapers make up 94% of the total amount ($100 - 6 = 94$). So $(15,600 \times 6) / 94 = 995.74 = 1000$ (approx) newspapers are lost in New York every day.

Another method for calculating: $(15,600 \times 100) / 94 = 16,595.74$ (this is the total number of newspapers in New York per day).

The total number of newspaper minus the number of newspapers successfully delivered is the number of newspapers lost per day: $16,595.74 - 15,600 = 995.74$

Question 5

What would Sydney's lost rate have to be to match the number of successful deliveries in Paris (excluding lost papers) per courier per day?

- A. 5%
- B. 7.5%
- C. 10%
- D. 12.5%
- E. 15%

Correct answer: B

Explanation

With a loss rate of 11%, the 7,704 newspapers that are successfully delivered in Sydney make up 89% of the total newspapers delivered ($100\% - 11\%$).

The total number of deliveries in Sydney (including lost papers) is $(7,704 \times 100) / 89 = 8,656$

In Paris, 8,007 newspapers are delivered successfully.

Calculate the percentage we have to deduct from 8,656 to receive 8,007. (The total number of successfully delivered newspapers in Paris $\times 100$) / the total number of newspapers delivered in Sydney (including lost papers) = $(8007 \times 100) / 8656 = 92.5\%$ of Sydney's newspapers have to be delivered successfully to match Paris's successful delivery rate.

The rate of lost papers is therefore $100 - 92.5 = 7.5\%$ (in comparison with the current existing 11% lost paper rate)

Popular Sports 2005
Number of Viewers (thousands)

Australia	UK	Netherlands	Greece
Rugby 3,000	Football 17,000	Football 2,865	Basketball 3,265
Cricket 2,750	Rugby 7,325	Skating 1,200	Football 1,568
Tennis 1,875	Cricket 6,585	Horse Riding 650	Surfing 650
Surfing 1,325	Tennis 4,685	Basketball 325	Sailing 485
Football 1,100	Badminton 325	Sailing 212	Tennis 235
Sailing 775	Sailing 150	Tennis 75	Swimming 62
Population			
17,000	60,000	16,000	10,500

Question 6

What proportion of the Dutch population watches football?

- A. 0.179%
- B. 1.79%
- C. 5.58%
- D. 11.79%
- E. 17.9%

Correct answer: E

Explanation

The number of Dutch football viewers is 2.865 million (2,865 thousand).

The population of The Netherlands is 16 million (16,000 thousand).

The proportion of the Dutch population that watches Dutch football = $(2865000 / 16000000) \times 100 = 17.9\%$

Another possibility is to ignore the 'thousand':

$(2865 / 16,000) \times 100 = 17.9\%$

Question 7

How many more Australian viewers watched sailing competitions compared with Greek viewers?

- A. 290
- B. 2900
- C. 29000
- D. 290000
- E. 2900000

Correct answer: E

Explanation

The number of Australian sailing viewers is 775,000.

The number of Greek sailing viewers is 485,000.

The difference between the two = $775,000 - 485,000 = 290,000$

Question 7

What is the approximate ratio of British football viewers to Australian football viewers?

- A. 15.5: 1
- B. 6.4: 1
- C. 16: 1
- D. 6: 1
- E. Cannot Say

Correct answer: A

Explanation

The number of British football viewers is 17,000,000.

The number of Australian football viewers is 1,100,000. The ratio of British to Australian football viewers is $17,000,000 / 1,100,000 = 15.45$. The ratio is 15.45 : 1 which is approximately 15.5 : 1.

TIP: Just by looking at the figures 17 million and 1.1 million, we already know that the ratio has to be slightly lower than 17: 1. This means that we can eliminate three options from the outset.

Question 8

What proportion of the people in all four nations are tennis viewers?

- A. 6.6%
- B. 66%
- C. 8.5%
- D. 0.85%
- E. Cannot Say

Correct answer: A

Explanation

The combined population of all four nations is: $17,000,000 + 60,000,000 + 16,000,000 + 10,500,000 = 103,500,000$.

The number of tennis viewers in all four nations is: $1,875,000 + 4,685,000 + 75,000 + 235,000 = 6,870,000$

The proportion is: $(6870000 / 103500000) \times 100 = 6.6\%$.

Question 9

How much smaller is the proportion of Dutch horse riding viewers compared with Greek surfing viewers?

- A. By 4.06%
- B. By 6.19%

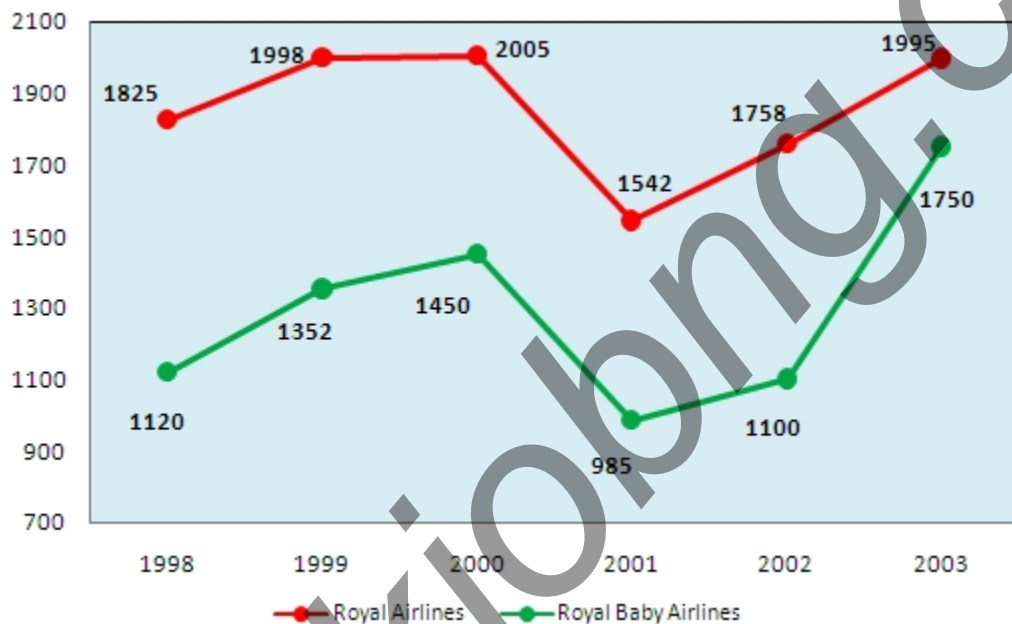
- C. By 2.13%
 - D. By 0.0213%
 - E. No Difference
- Correct answer: C**

Explanation

The proportion of Dutch horse riding viewers = (the number of horse riding viewers / Dutch population) x 100 = (650,000 / 16,000,000) x 100 = 4.06%

The proportion of Greek surfing viewers = (the number of surfing viewers / Greek population) x 100 = (650,000 / 10,500,000) x 100 = 6.19%

The difference = 6.19 - 4.06 = 2.13%



Question 10

Approximately what proportion of Royal Air Services passengers flew Royal Baby Airlines in 2001?

- A. 40%
- B. 45%
- C. 50%
- D. 55%
- E. Cannot Say

Correct answer: A

Explanation

The total number of passengers travelling with Royal Air Services in 2001 was 1542000 + 985000 = 2527000.

The percentage of travellers flying with Royal Baby Airlines = (the number of passengers using Royal Baby Airlines / amount of passengers using Royal Air Services) x 100 = $985000 / 2527000 = 38.98\%$ which is approximately 40%.

For the sake of simplicity you can delete 3 zeros from each side of the equation - 985/2527 - and reach the same result.

Question 11

If an average ticket with Royal Airlines cost £195 in 2001, and prices increased by an average of 12% in 2002, what were the approximate revenues of Royal Airlines from ticket sales in 2002?

- A. £3,850,000
- B. £385,000,000
- C. £3,800,000
- D. £380,000,000
- E. Cannot Say

Correct answer: B

Explanation

Calculate the average price of a ticket on Royal Airlines in 2002. In order to do this, add 12% to £195, the average ticket price in 2001. $195 \times 1.12 = £218.4$

The number of tickets sold by Royal Airlines in 2002 was 1758000. This means that the total revenues from Royal Airlines ticket sales in 2002 = $1758000 \times 218.4 = £383,947,200$? £385,000,000.

Question 12

In 2006, Royal Airlines and Royal Baby Airlines are each expected to sell 10% more than the number of tickets sold by Royal Airlines in 2000. The average Royal Baby Airlines ticket price is £75, and the average Royal Airlines ticket price is £232. What are the expected revenues from ticket sales in 2006 for Royal Air Services?

- A. 677 thousand
- B. 677 million
- C. 677 hundred
- D. 6.77 million
- E. 558 million

Correct answer: B

Explanation

In 2000, Royal Airlines sold 2005000 tickets.

The number of tickets each airline is expected to sell in 2006 is $2005000 \times 1.1 = 2205500$.

The combined revenues in 2006 from ticket sales is = $(2205500 \times 75) + (2205500 \times 232) = 677088500$? £677 million

Question 13

Over which two-year period did Royal Airlines have the greatest number of passengers?

- A. 1998-1999
- B. 1999-2000
- C. 2000-2001
- D. 2001-2002
- E. 2002-2003

Correct answer: B

Explanation

You can answer this question by looking at the graph, rather than adding up the number of passengers travelling each year. The graph shows us that the red line is highest in 1999-2000. Therefore, Royal Airlines had the greatest number of passengers during this two-year period.

Question 14

Approximately what proportion of overall ticket sales did Royal Baby Airlines account for in 2003?

- A. 39%
- B. 41%
- C. 43%
- D. 45%
- E. 47%

Correct answer: E

Explanation

The number of tickets sold by Royal Baby Airlines in 2003 was 1750000.

The overall number of tickets sold by Royal Air Services in 2003 = 1750000 + 1995000 = 3745000.

The percentage of tickets sold by Royal Baby Airlines in 2003 was $(1750000 / 3745000) \times 100 = 46.73\% = 47\%$ (approx)

European Large Family Car Sales (Delivered by Sea Vessels)



Question 15

What was the total number of large family cars sold in 2004?

- A. 1.2 million
 - B. 2 million
 - C. 2.2 million
 - D. 2.4 million
 - E. Cannot Say
- Correct answer: C**

Explanation

There were 20 ? 100 vessels of minivans sold = 2000.

The same number of SUVs were sold (2000 vessels). 500 minivans fit into one vessel = 500 ?

2000 = 1,000,000 minivans sold

600 SUVs fit into one vessel = 600 ? 2000 = 1,200,000 SUVs sold

A total of 2,200,000 large family cars were sold in 2004.

Question 16

How many hundreds of SUV vessels were sold in 2002?

- A. 15
- B. 20
- C. 25
- D. 30
- E. 35

Correct answer: A

Explanation

The red block represents SUV sales. In the 2002 column, the SUV section starts at the 20 benchmark and ends at 35.

Therefore, $35 - 20 = 15$ hundred vessels of SUVs were sold.

Question 17

How many more vessels of minivans were sold in the between the years 2000-2004, compared with SUVs?

- A. 1500
- B. 3500
- C. 5000
- D. 5500
- E. 6500

Correct answer: D

Explanation

To make the calculation easier, we'll initially use the numbers in the graph without adding the hundreds. T

he total number of minivan vessels sold between 2000-2004 = $50 + 30 + 20 + 15 + 20 = 135$ minivan vessels.

The total number of SUV vessels sold between 2000-2004 = $(60-50) + (45-30) + (35-20) + (35-$

$$15) + (40-20) = 80.$$

The difference between the number of minivan vessels sold and the number of SUV vessels sold is $= 135 - 80 = 55$. If we add the hundreds that we initially ignored, $55 \times 100 = 5500$.

5500 more minivan vessels were sold compared with SUV vessels.

Question 18

Sea delivery per car (either SUV or minivan) costs \$25. What were the sea delivery costs for large family cars in 2002?

- A. 19 million
- B. 42.5 million
- C. 45.5 million
- D. 47.5 million
- E. Cannot Say

Correct answer: D

Explanation

In 2002, there were $20 \times 100 = 2000$ vessels of minivans $\times 500$ minivans in each vessel = 1,000,000 minivans.

There were also $15 \times 100 = 1500$ vessels of SUVs $\times 600$ SUVs in each vessel = 900,000 SUVs
 $1,000,000 + 900,000 = 1,900,000$ cars sold in total $\times \$25$ per car delivery = \$47,500,000 total delivery costs in 2002.

Question 19

What was the ratio of minivans to SUVs sold in 2000?

- A. 1:3
- B. 25: 6
- C. 6: 25
- D. 5:1
- E. None of the above

Correct answer: B

Explanation

In 2000, there were $10 \times 100 = 1000$ vessels containing $\times 600$ SUVs = 600,000 SUVs

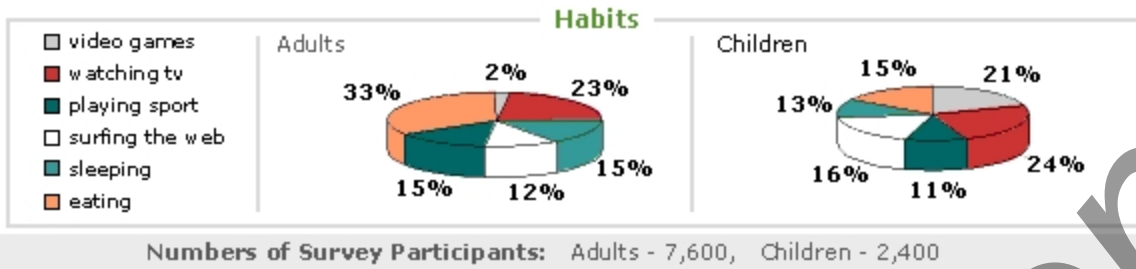
In terms of minivans, there were $50 \times 100 = 5000$ vessels containing $\times 500$ minivans = 2,500,000 minivans

To calculate the ratio, divide the larger number by the smaller number $= 2,500,000 / 600,000 = 4.16$.

The ratio of minivans to SUVs in 2000 = 4.16: 1 (in round numbers, 25:6)

Are we so different?

Survey Results on Children & Adults Preferred Leisure Activities



Question 20

Roughly estimate how many of the total survey respondents surf the Internet.

- A. 360
- B. 760
- C. 1100
- D. 1300
- E. Cannot Say

Correct answer: D

Explanation

12% of 7,600 adults surf the Internet.

10% of 7600 is 760, therefore the number of adults that surf the Internet should be slightly higher (12%) = 900 (approx)

16% of 2,400 children surf the Internet/ 10% of 2400 is 240, and an additional 5% is 120 = 240 + 120 = 360.

The number of children who surf the Internet is slightly higher (16%) = 400 (approx)

900 + 400 = roughly 1300

END OF NUMERICAL REASONING

NIGERIA LNG APTITUDE TEST PAST QUESTIONS AND SOLUTIONS

Verbal Reasoning - (15 mins for 20 qtns)

TEST ONE:

Verbal Reasoning - Instructions

The verbal reasoning section measures your ability to think logically about written information. In this test, you will be given passages of text and several statements relating to the text. You will be asked to decide whether each statement follows logically from the information in the passage.

For each statement there are three answer options:

***True** - This means that, on the basis of information in the passage, the statement is true or follows logically from the passage.*

***False** - This means that, on the basis of information in the passage, the statement is false.*

***Cannot Say** - This means that it is not possible to tell from the information in the passage whether the statement is true or false.*

When answering each question, it is important to base your answer only on the information in the passage and not on any other knowledge you may have of the subject matter.

Passage A

The costs of roaming - the service which allows UK customers to use their mobile phone abroad - are much higher than those in France, Germany, Sweden and Italy. Many people get caught out because they are unaware of the high prices, and that they get charged for simply receiving calls whilst abroad. Less than a quarter of consumers had any knowledge of the price of using a mobile phone abroad when they bought their phone. Better consumer information is vital if prices for pre-pay international roaming in the UK are to come down.

Question 1

It is more expensive for German customers to use a roaming service than it is for UK customers.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

The opposite is true since the passage says "the costs of [UK] roaming... are much higher than those in France, Germany".

Question 2

Pay-as-you-go roaming rates are lower than they are for contract customers.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

The passage does not compare pay-as-you-go with pre-pay.

Question 3

Customers can be charged for calls which they do not make themselves.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

The passage states that customers "get charged for simply receiving calls while abroad"

Passage B

Globalisation is putting fresh pressure on mid-sized firms, with large companies moving into their markets and dictating prices. This kind of company feels the pressure on all sides. They are too large to qualify for the grants and assistance that small enterprises can count on, but are too small to wield the kind of influence their larger competitors can bring to bear. But despite the squeeze, most mid-sized firms still believe that they can deliver steady growth, by playing to their traditional strength: being more nimble and more customer-focused than their larger rivals.

Question 4

Large companies have a greater effect on prices than mid-sized companies.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

The first sentence says that large companies dictate the prices for mid-sized firms.

Question 5

The size of grant awarded to a company is indirectly proportional to the size of the company.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

With the pressure of time, it might be tempting to answer True here. On careful reading of the passage, it describes how mid sized firms are too large to qualify for grants, but it does not say explicitly how the size of a grant might be related to the size of company. The question is stating quite a specific relationship, whereas all we are told is that small companies get grants and mid-sized firms do not. For example we are told nothing about the size of a grant a large company might get.

Question 6

Traditionally, mid-sized firms are faster than large companies at adapting to market changes.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

The last sentence describes one of the traditional strengths of a mid-size firm as "being more nimble" which we can interpret to mean faster at adapting to change.

Passage C

If society seems obsessed with youth, it is at least partly because companies are. Like it or not, the young increasingly pick the styles and brands that trickle up to the rest of the population. Nike, Abercrombie & Fitch and Timberland first found success with the young, and when that clientele tired of them the companies felt the loss deeply. Now that adults are no longer necessarily expected to act and look grown-up, parents and children can be found listening to exactly the same music, playing the same computer games, watching the same TV programmes, and wearing the same brands of clothes and shoes.

Question 7

An adult's style can sometimes be similar to that of a child.

- A. True
- B. False

C. Cannot say

Correct answer: A

Explanation

The sentence that proves this is "parents and children can be found listening to exactly the same music, playing the same videogames? and wearing the same brands of clothes and shoes [as the young]".

Question 8

The profits of Timberland are not affected by young customers.

A. True

B. False

C. Cannot say

Correct answer: B

Explanation

The passage says that "when that clientele [the young] tired of them the companies felt the loss deeply". Meaning that Timberland's profits are in fact closely affected by the purchasing habits of the young.

Question 9

Adults wear the same shoes as children because they want to look younger.

A. True

B. False

C. Cannot say

Correct answer: C

Explanation

The passage does not say why adults and children sometimes end up with the same styles. The passage implies that by listening to the same music and wearing the same clothes as young people, adults are not considered grown-up. But the passage does not say why some adults adopt this style (for example it could be price, comfort, or any number of reasons other than wanting to look younger, but we are not told.)

Passage D

Television is changing as it goes digital. The result will not only be better quality pictures and sound but also personal TV, with viewers able to tailor the programmes they watch and even interact with them. How much money this will make for programme producers or broadcasters, whoever they may be, is not so clear. Cable, satellite and terrestrial television broadcasters are upgrading their equipment to provide higher quality digital services. Rupert Murdoch's News Corporation will become the first company in the world to migrate an entire national TV system over to digital when it turns off its old analogue version of its British satellite service, BSkyB.

Question 10

Rupert Murdoch is the owner of BSkyB.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

This is stated in the passage where it says "Rupert Murdoch's News Corporation? BSkyB", meaning he is the owner.

Question 11

The only change from traditional analogue services to digital services will be the picture quality.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

The passage says of switching from analogue to digital: "The result will be better quality pictures and sound but also personal TV, with viewers able to tailor the programmes they watch?".

Question 12

Television broadcasters are upgrading their equipment because they will make more money from digital TV.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

This is quite obvious since the passage explicitly says in the last sentence of the first paragraph that it is not clear how much money broadcasters will make from upgrading.

Passage E

Brand equity has become a key asset in the world of competitive business. Indeed, some brands are now worth more than companies. Large corporations themselves are widely distrusted, whereas strangely, brands have the opposite effect on people. Brands are used to humanise corporations by appropriating characteristics such as courage, honesty, friendliness and fun. An example is Dove soap, where a dove represents white, cleanliness and peace. Volkswagen like to give the impression through their advertising that they are a reliable, clever, technical product. In a sense, rather than the product itself, the image and the idea are the selling point.

Question 13

Brands have always been an important asset to a company.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

The passage says "Brand equity has become a key asset in?" implying it has not always been.

Question 14

Many people distrust large corporations.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

The passage says "Large corporations themselves are widely distrusted". Widely implies an opinion held by many people, and the opinion held would be one of distrust.

Question 15

Dove soap chose a dove for their brand to give a sense of cleanliness and peace.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

Whilst the passage does say that the dove gives an impression of "white, cleanliness and peace", and therefore is a successful brand, the passage does not say how or why the company chose the brand in the first place

Passage F

The first problem with financial statements is that they are in the past; however detailed, they provide just a snap-shot of the business at one moment in time. There is also a lack of detail in financial statements, giving little use in the running of a business. Financial statements are provided for legal reasons to meet with accounting regulations and are used mainly by City analysts who compute share prices and give guidance to shareholders. Accounts often have hidden information and may also be inconsistent; it is difficult to compare different companies' accounts, despite there being standards, as there is much leeway in the standards

Question 16

Financial statements are useful for businesses to understand their financial activities.

- A. True
- B. False
- C. Cannot say:

Correct answer: B

Explanation

The passage says that financial statements have "a lack of detail in financial statements, giving little use in the running of a business", which is supported by other critical statements such as "the first problem with financial statements is that they are in the past" means they cannot be considered useful for businesses to understand their financial activities

Question 17

Companies create financial statements in order to comply with their legal obligations.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

This is stated here: "Financial statements are provided for legal reasons to meet with accounting regulations".

Question 18

If account reporting standards were tightened, it would be easier to compare the performance of different companies.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

The last sentence in the passage says "it is difficult to compare different companies' accounts, despite there being standards, as there is much leeway in the standards". This implies that if there were less leeway in the standards, it would be easier to compare different companies' accounts. It is fair to say that the accounts of a company are tied to the 'performance' of a company, and so it would be easier to compare the performance of different companies if reporting standards were tightened

Passage G

Advertising and selling books via Internet sites is becoming more popular with traders. It costs less to publicise a book on the Internet than by traditional methods, and as books are stored in warehouses prior to being despatched to customers, overheads are lower than those of shops. True, the price war on the Internet is likely to put pressure on royalties, with publishers demanding that they be calculated not on the cover prices of books but on the prices actually received for them. However, these discounts will be greatest on best-sellers, rather than other books.

Question 19

The consumer demand for books sold on the Internet is increasing.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

Though the passage states that selling books via Internet sites is becoming more popular with traders, it does not tell that consumer demand for books sold on the Internet is increasing

Passage H

The number of accidents, which occur during the course of the working day, will never be reduced to zero, regardless of the attempts of regulating bodies. This is because all activity inevitably involves some degree of risk and luck. However, it is possible to reduce the number of occupational accidents, and one way of doing this would be to impose punitive fines on organisations within which occupational accidents occur. Whilst this will result in cases of injustice to some organisations, the overall effect for the employee, in terms of securing a safer workplace, will surely be beneficial.

Question 20

Some accidents at work are the result of misfortune.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

The statement is supported by the sentence. *"This is because all activity inevitably involves some degree of risk and luck".*

Verbal Reasoning - (15 mins for 20 qtns)

TEST TWO:

Verbal Reasoning - Instructions

The verbal reasoning section measures your ability to think logically about written information. In this test, you will be given passages of text and several statements relating to the text. You will be asked to decide whether each statement follows logically from the information in the passage.

For each statement there are three answer options:

True - This means that, on the basis of information in the passage, the statement is true or follows logically from the passage.

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Cannot Say - This means that it is not possible to tell from the information in the passage whether the statement is true or false.

When answering each question, it is important to base your answer only on the information in the passage and not on any other knowledge you may have of the subject matter.

Passage A

At any given moment we are being bombarded by physical and psychological stimuli competing for our attention. Although our eyes are capable of handling more than 5 million bits of data per second, our brain are capable of interpreting only about 500 bits per second. With similar disparities between each of the other sense and the brain, it is easy to see that we must select the visual, auditory, or tactile stimuli that we wish to compute at any specific time.

Question 1

Physical stimuli usually win in the competition for our attention.

- A. True
- B. False
- C. Cannot Say

Correct answer: C

Explanation

Cannot say

Question 2

The capacity of the human brain is sufficient to interpret nearly all the stimuli the sense can register under optimum condition.

- A. True
- B. False
- C. Cannot Say

Correct answer: B

Explanation

False

Question 3

Eyes are able to cope with a greater input of information than ears.

- A. True
- B. False
- C. Cannot Say

Correct answer: A

Explanation

True

Passage B

Scientists live in a necessary tension, holding fast to laws and regularities already discovered, while remaining alert to recognise anomalies and to judge whether these are errors of observation or hoaxes or clues to deeper coherence, a more profound law which will change the whole outlook of science.

Question 4

Some apparent scientific anomalies may just be hoaxes.

- A. True
- B. False
- C. Cannot Say

Correct answer: A

Explanation

True

Question 5

The whole outlook of science will soon be changed.

- A. True
- B. False
- C. Cannot Say

Correct answer: C

Explanation

Cannot say

Question 6

The assumptions made by scientists are not subject to change.

- A. True
- B. False
- C. Cannot Say

Correct answer: B

Explanation

False

Question 7

Events which seem to conflict with laws of science can lead to new insights.

- A. True
- B. False
- C. Cannot Say

Correct answer: A

Explanation

True

Passage C

Researchers have successfully mapped the genetic code of the mouse and have generously elected to make their findings available to scientists everywhere. A genetic model of the mouse is of benefit to researchers because it is believed that one hundred million years ago, both mice and humans shared a common rodent-like ancestor. This makes mice ideal substitutes for humans in genetic studies. Therefore, the mouse is one of the most useful animals for studying cancer and other diseases.

Question 8

The research findings show that humans and mice once had a common ancestor.

- A. TRUE
- B. FALSE
- C. Cannot say

Correct answer: B

Explanation

The first sentence in the passage states that successful mapping of the genetic code of mouse is the research result. From the second sentence of the passage, it is known that the sharing of a

common rodent-like ancestor between mice and humans is a general belief. It is therefore a *false* statement.

Question 9

It is likely that these findings, due to a similar shared genetic code, will result in research that will lead to the eradication of cancer.

- A. TRUE
- B. FALSE
- C. Cannot say

Correct answer: C

Explanation

There is insufficient information in the passage to establish how useful this research will ultimately be.

Passage D

The project was ambitious in its size, complexity, triparty nature, and in its pioneering of the Private Finance Initiative. This difficulty was unavoidable and contributed to the project's failure. However, a more thorough estimate of the unknown difficulties and timescales would have enabled the Department to better prepare for the project, and increase its chance of success.

In December 1997, XSoft indicated they needed time to complete the project, which should have been inevitable. If the Department knew from the start how long the project would take, it is questionable whether they would have considered inception, especially considering the implications of delay on the overall profitability for the venture.

Question 10

If more care had been put into estimating the difficulties, it is less likely the project would have failed.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

Since "more thorough" can be considered equivalent to "giving more care", this is stated as true in the following excerpt: "a more thorough estimation of the unknown difficulties and timescales would...increase its chance of success".

Question 11

XSoft withheld information from the Department regarding how long the project would take.

- A. True
- B. False

C. Cannot say

Correct answer: C

Explanation

We are told XSoft requested more time, and the passage implies the Department did not know how long it would take at the beginning, but the passage does not tell us if XSoft did or did not withhold time information.

Question 12

The Department's profits were dependent upon how long the project took.

A. True

B. False

C. Cannot say

Correct answer: A

Explanation

We are told that there were "implications of delay on overall profitability for the venture".

Passage E

Ever since the gun's invention it has been changing the world in many different ways. Many of the developments in gun design have been brought about by man's desire to protect himself, and the challenge of inventing bigger and more accurate weapons. Each time there has been a major innovation in the development of the gun, there has been a profound effect on the world. The gun helped in the exploration of the world and it has also helped in the development of society as we know it.

Question 13

The gun was invented because the human race needs to protect themselves.

A. True

B. False

C. Cannot say

Correct answer: C

Explanation

The passage does not say how or why the gun was invented. It does say that some changes to the gun's design have been because humans want to protect themselves, but the passage does not say how or why the gun was first invented.

Question 14

Guns are the reason our society is the way it is today.

A. True

B. False

C. Cannot say

Correct answer: B

Explanation

The gun "has also helped in the development of society as we know it". The word help implies it is not the only contributor and is therefore not the reason our society is the way it is today.

Question 15

Financial incentives had no part to play in the development of the gun.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

The passage does not mention financial incentives or economic gain, so we cannot tell from information in the passage alone.

Passage F

Being socially responsible is acting ethically and showing integrity. It directly affects our quality of life through such issues as human rights, working conditions, the environment, and corruption. It has traditionally been the sole responsibility of governments to police unethical behaviour. However, the public have realised the influence of corporations and, over the last ten years, the level of voluntary corporate social responsibility initiatives that dictate the actions of corporations has increased

Question 16

The ethical actions of corporations has changed over the last ten years.

- A. True
- B. False
- C. Cannot say

Your answer:

Correct answer: A

Explanation

The passage says that the public have caused corporations to alter their ethical actions: *"over the last ten years, the level of voluntary corporate social responsibility initiatives that dictate the actions of corporations has increased."*

Question 17

Corporations can influence the public's quality of life.

- A. True
- B. False

C. Cannot say

Correct answer: A

Explanation

This one is slightly less obvious. We are first told that being socially responsible directly affects our quality of life. Then we are told that corporate social responsibility dictates the actions of corporations. So following that logic, corporations must be able to affect our quality of life.

Question 18

Traditionally, the government have relied upon only the large corporations to help drive corporate social responsibility, whilst they concentrated on the smaller corporations.

A. True

B. False

C. Cannot say

Correct answer: B

Explanation

We are told that "traditionally it has been the sole responsibility of the government to police unethical behaviour", meaning traditionally no corporation played a part; not even large corporations.

Passage

A well-nourished child can be more likely to be a studious one. But food has been seen as a cost to be cut in times of austerity, rather than an ingredient of good schooling. That may now be changing: as the government worries about obesity - which is fast rising among children - and urges everyone to eat less salt, fat and sugar, and more fruit and vegetables, the deficiency and unhealthiness of most school meals is striking. But cash constraints make change difficult.

Question 19

Children who eat healthily will perform better in exams.

A. True

B. False

C. Cannot say

Correct answer: C

Explanation

The passages says "a well-nourished child can be more likely to be a studios one", which means they are more likely to study. Whilst the passage suggests eating healthily can help, it does not say definitively if the child will or will not perform better in exams.

Question 20

The number of obese children used to be less than it is now.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

The passage says, in reference to obesity, "is fast rising among children" meaning in the past it was less than it is now.

Verbal Reasoning - (15 mins for 20 qtns)

TEST THREE:

Verbal Reasoning - Instructions

The verbal reasoning section measures your ability to think logically about written information. In this test, you will be given passages of text and several statements relating to the text. You will be asked to decide whether each statement follows logically from the information in the passage.

For each statement there are three answer options:

True - This means that, on the basis of information in the passage, the statement is true or follows logically from the passage.

False - This means that, on the basis of information in the passage, the statement is false.

Cannot Say - This means that it is not possible to tell from the information in the passage whether the statement is true or false.

When answering each question, it is important to base your answer only on the information in the passage and not on any other knowledge you may have of the subject matter.

Passage

Employees in the United Kingdom are now enjoying more holidays than ever before. From 1st April 2009 the minimum statutory entitlement to paid annual leave for workers has increased from 4.8 weeks to 6 weeks (based on a five day working week). This is the minimum, but some employers may offer more - you should consult your contract of employment. However, the employer can choose when you take your holidays. The 6 week entitlement is for an employee in full employment for a year with a five day working week, and includes public holidays. The entitlement for part-time workers is calculated as 6 weeks times their normal working week. Similarly, the entitlement for a full-time worker who does not complete a year with an employer is worked out on a pro-rata basis.

Question 1

From 1st April 2009 workers in the UK who work a five day week are entitled to 30 days? paid holiday per year of work.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

True

Question 2

Employees granted long-term sick leave lose their full entitlement of paid annual leave.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

Cannot say

Question 3

You have a right to take at least some of your annual holidays during the summer.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

False

Question 4

The annual leave entitlement of 6 weeks includes public holidays, but some employers may give additional leave entitlement.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

True

Passage

In the wake of security concerns and the ever-increasing numbers of flying passengers - more than 90 million passengers pass through UK immigration each year - new ways have been sought to recognise passengers who may have a criminal record or are considered "undesirable". The use of fingerprints is messy and time-consuming, and is not always accurate. A method that has been on trial since 2002 is the "Iris Recognition System." This method takes a digital image of the iris patterns on the back of the eye and compares it with those that are already stored in a databank. This system has proved to be 100% accurate since no two irises have exactly the same pattern, not even those of identical twins. Even

the right and left eyes of the same person do not exhibit the same pattern. It is believed that the new method will help to speed up the immigration system as well as make it more secure.

Question 5

It is believed that a new way of recognizing previously identified terrorists could speed up the immigration process and make it more accurate.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

True

Question 6

The 'Iris Recognition System' is not as accurate as the use of fingerprints.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

False

Question 7

One problem with the 'Iris Recognition System' is that it cannot distinguish between identical twins.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

False

Passage

In Europe 12 million animals suffer every year in the name of research. The last directive of the European Commission designed to address the issues of animals being mistreated for research was made in 1986. But things have changed. In recent years more experiments involving transfer of genes from one species to another have been carried out, so new guidelines are required. In May 2009 the European Parliament voted to update the rules to better protect laboratory animals. One of their recommendations was a ban on experiments using great apes except those cases where it would benefit the apes themselves, or when this was the only option to investigate diseases that threaten humans.

Hepatitis C, for example, only occurs in humans and chimpanzees, so there is little option but to use chimps in scientific research into this disease. However, this and other proposed changes are unlikely to be adopted for at least three years.

Question 8

We will have to wait for a directive to be passed that aims to protect animals from being mistreated for research.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

False

Question 9

New guidelines on the use of animals in scientific research are needed so as to include the recent increase in research using genetic engineering.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

True

Question 10

The European Parliament recommended that the only instance in which tests on apes be permitted is when that test was in the interests of human life and the results could not be achieved by other means.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

False

Passage

Identity theft and identity fraud are crimes that were almost unheard of a few years ago. Yet the number of recorded cases of these crimes in the UK has increased from 9,000 in 1999 to 77,500 in 2007. Identity theft is the misappropriation of the identity of another person. Identity fraud is the use of this identity theft in criminal activity. In modern society you need to prove your identity for all sorts of

reasons - to open a bank account, to obtain a loan, for credit when you make purchases, and so on. An identity thief can use your personal details to do any of these things, even to claim a benefit in your name. All he needs is access to a few of your personal details or a document bearing your name. The identity fraudster will steal or forge your documents, such as a passport or a driving license, and use them in criminal activity. To protect yourself from identity theft, make sure that you don't give away any personal details unless you are sure it's safe to do so, and always ke

Question 11

The number of recorded cases of identity theft and identity fraud in the UK has risen exponentially from 9,000 in 1999 to 77,500 in 2007.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

Cannot say

Question 12

Some identity thieves steal another person's identity to obtain a benefit in his or her name.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

True

Question 13

You should protect yourself against identity theft by never applying for a passport or a driving license.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

False

Passage

Outrage has been rife in London this week as plans were announced to expand the congestion charge zone in London. Despite strong opposition from local residents and workers of affected areas, plans are

continuing without delay. The implications of these plans are severe for people living in areas like Clapham and Brixton where residents will have to pay up to three hundred pounds a year to keep their car in their local area. The money will be used to improve public transport and is part of an initiative to increase the use of public transport and decrease pollution levels in the capital.

Question 14

Local politicians are opposing the expansion plans in the affected areas.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

Cannot say. The passage does not tell us the position of local politicians. It refers to opposition from "*local residents*" which does not mean the same as 'local politicians'.

Question 15

The congestion charge is being extended to decongest the capital.

- A. True
- B. False
- C. Cannot say

Correct answer: B

Explanation

False. It is tempting to think this statement is true, but in the last sentence it is clear the money will be used to improve public transportation.

Question 16

The author is against plans to expand the congestion zone.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

Cannot say. The author presents the negative and positive implications of the plan. The author's position is not clear

Passage

At the moment GTC, like other European producers, is able to relieve at least some of its over-capacity by exporting, partly to Central America. A decade from now, the region will be largely self-sufficient and trade will be starting to flow the other way. However, for GTC investors, the company's recent

restructure could herald better times. The group's lack of focus and lacklustre returns has been much criticized of late.

Question 17

Restructuring generally produces an increase in profitability.

- A. True
- B. False
- C. Cannot say

Correct answer: C

Explanation

Cannot say. There is not sufficient information in the passage to confirm or refute this statement.

Question 18

In ten years time, Central America will start exporting to Europe.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

True. The passage clearly states that *A decade from now ... trade will start flowing the other way.*

Question 19

Most European companies are producing beyond the normal capacity.

- A. True
- B. False
- C. Cannot say

Correct answer: A

Explanation

True. The passage states that *"...GTC, like other European producers, is able to relieve at least some of its over-capacity by exporting"*. The keyword here is 'over-capacity'.

Passage

The big economic difference between nuclear and fossil-fuelled power station is that nuclear reactors are more expensive to build and decommission, but cheaper to run. So disputes over the relative efficiency of the two systems revolve not just around the prices of coal and uranium today and tomorrow, but also around the way in which future income should be compared with current income.

Question 20

The main difference between nuclear and fossil-fuelled power stations in an economic one.

- A. True
- B. False
- C. Cannot Say

Correct answer: C

Explanation

Cannot say

END OF VERBAL REASONING

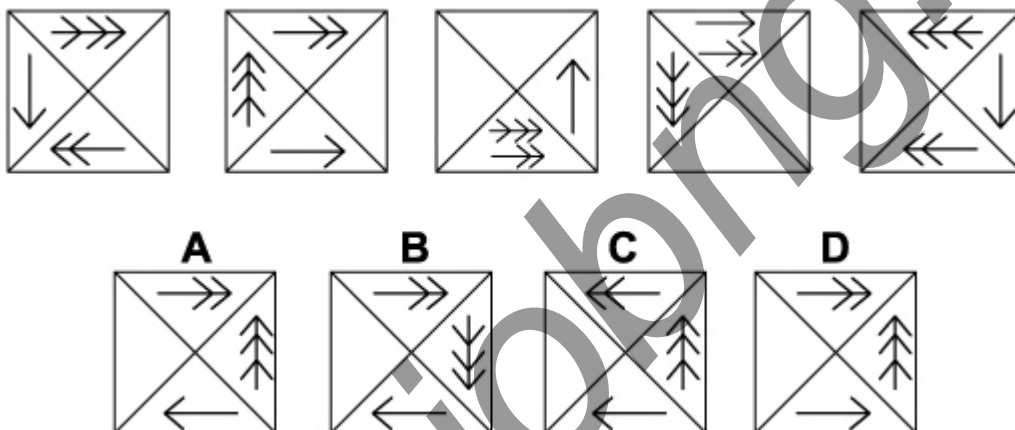
NIGERIA LNG APTITUDE TEST PAST QUESTIONS AND SOLUTIONS

Abstract Reasoning(16 mins for 16 qtns)

TEST ONE:

Abstract Reasoning - Instructions

In this section you will have to answer questions that require you to follow the logic underlying a set of figures. In each question, you will need to determine which of the possible answers best matches the next figure in the sequence, or replaces a missing figure in the sequence.



Question 1

Which of the options is the next shape in the sequence?

Correct answer: A

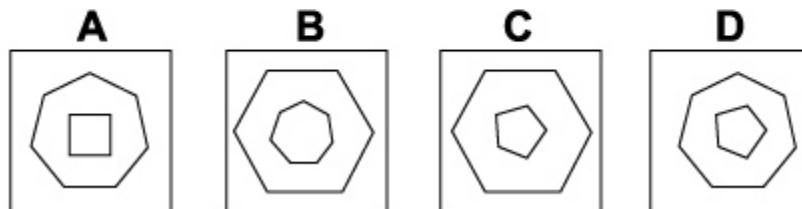
Explanation

In this question the arrows move around the outside of the grid according to the direction of the arrowheads and a number of places given by the number of arrowheads. However, when two arrows occupy the same quarter of the diagram, the direction of the arrowheads on both arrows reverses.

For the next diagram of the sequence, therefore, the arrow with one arrowhead moves one place clockwise, the arrow with two arrowheads moves two places clockwise and the arrow with three arrowheads moves three places anticlockwise. Since none of them then occupy the same quarter of the diagram, none of the arrowheads are reversed. The correct answer, therefore, is A.



Which of the following replaces the question mark in the sequence?



Question 2

Which of the options should replace the question mark (?) to complete the sequence?

Correct answer: D

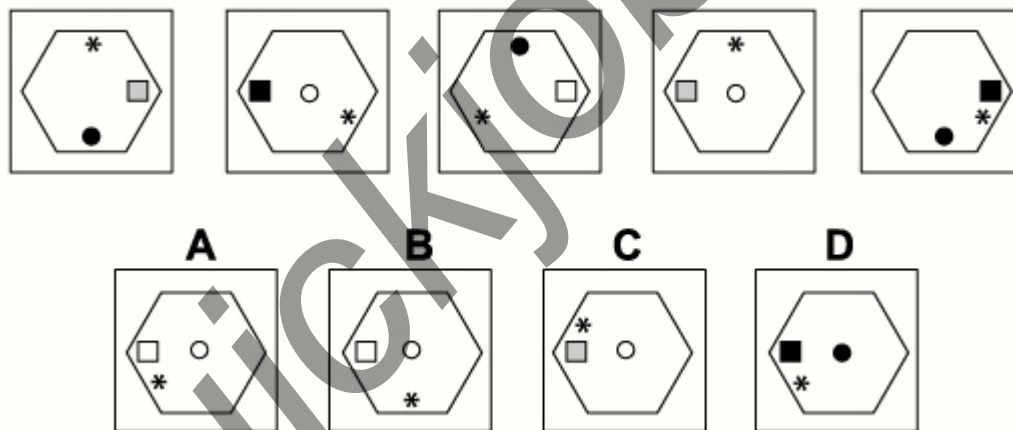
Explanation

Each diagram shows a regular polygon inside another regular polygon.

The number of sides of the outer polygon decreases by one each time. The number of sides of the inner polygon increases by one each time.

The sum of the sides of the two polygons is always 12.

For the missing diagram of the sequence, therefore, there should be a regular pentagon (fivesided polygon) inside a regular heptagon (seven-sided polygon). The correct answer, therefore, is D.



Question 3

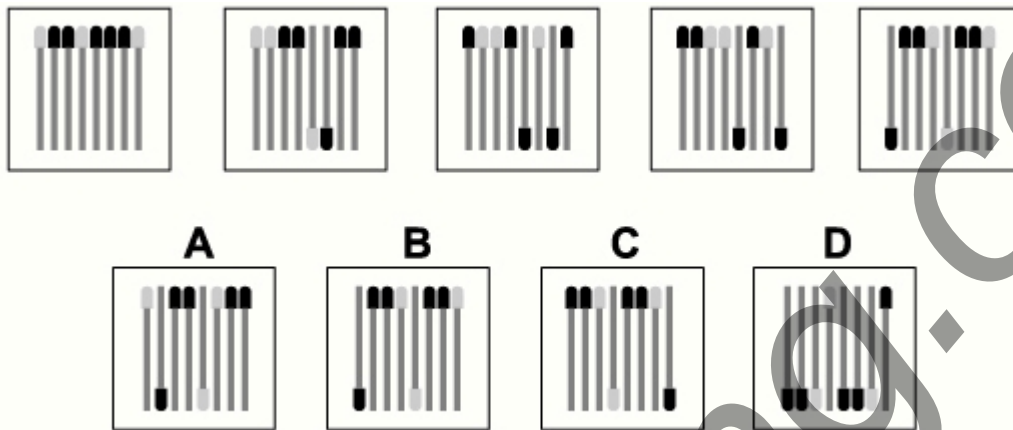
Which of the options is the next shape in the sequence?

Correct answer: A

Explanation

In this question, there are three shapes - an asterisk, a square and a dot. Each shape has its own rule to follow.

The asterisk rotates around the inside of the hexagon by 120° clockwise each time.
 The square moves across the horizontal axis of symmetry of the hexagon from one vertex to the opposite vertex, then back again. Its colour changes from grey to black to white, back to grey etc.
 The dot moves up and down the vertical axis of symmetry of the hexagon, occupying three positions - two opposite edges and the centre of the hexagon. Its colour alternates between black and white.
 Following all these rules, the correct answer is A



Question 4

Which of the options is the next shape in the sequence?

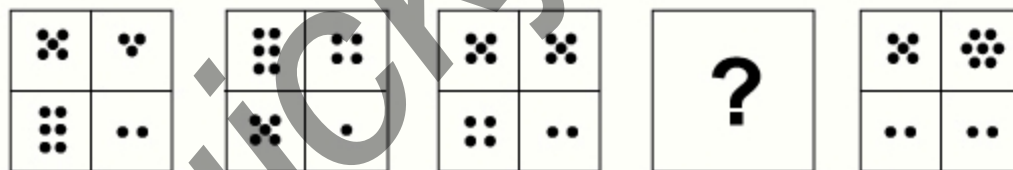
Correct answer: A

Explanation

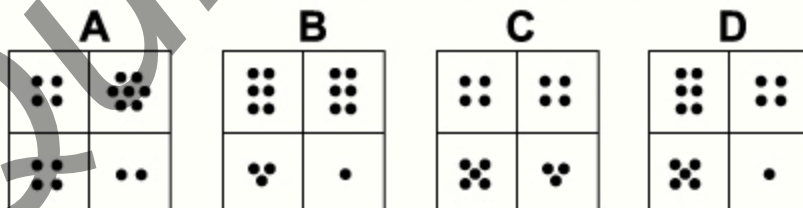
In this question there are eight matchsticks of two different colours.

Each time, the middle two matchsticks are turned upside down and then the matchstick on the far right is moved to the left.

When these two rules are applied simultaneously, the correct answer is A.



Which of the following replaces the question mark in the sequence?



Question 5

Which of the options should replace the question mark (?) to complete the sequence?

Correct answer: B

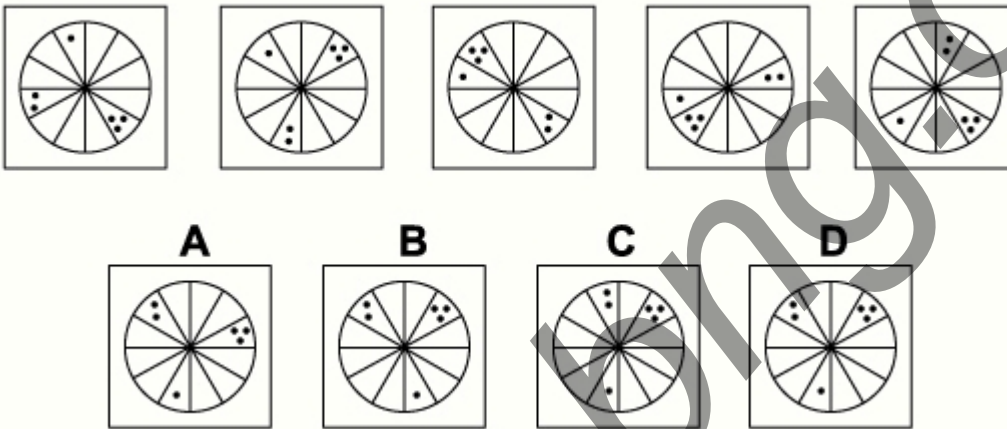
Explanation

In this question there are two rules to follow that are applied alternately.

The first rule is that the numbers of dots in the top row increase by one while the numbers of dots in the second row decrease by one.

The second rule is that the numbers of dots in the left column decrease by one while the numbers of dots in the right column increase by one.

To obtain the missing diagram of the sequence, the first rule should be applied and the correct answer is B



Question 6

Which of the options is the next shape in the sequence?

Correct answer: D

Explanation

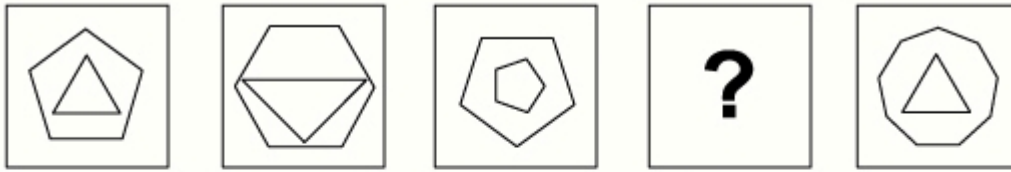
In this question there is a single dot, a group of two dots and a group of three dots that move around the twelve sectors of a circle.

The single dot always moves one place anticlockwise.

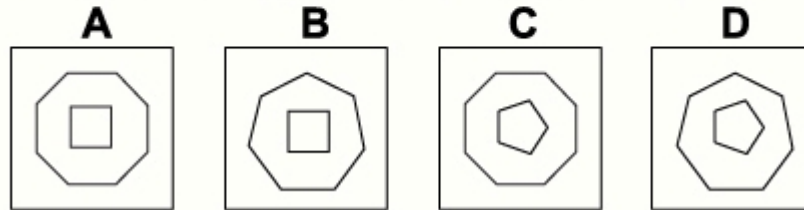
The group of two dots always moves two places anticlockwise.

The group of three dots always moves three places anticlockwise.

When all these rules are followed, the next diagram of the sequence is D.



Which of the following replaces the question mark in the sequence?



Question 7

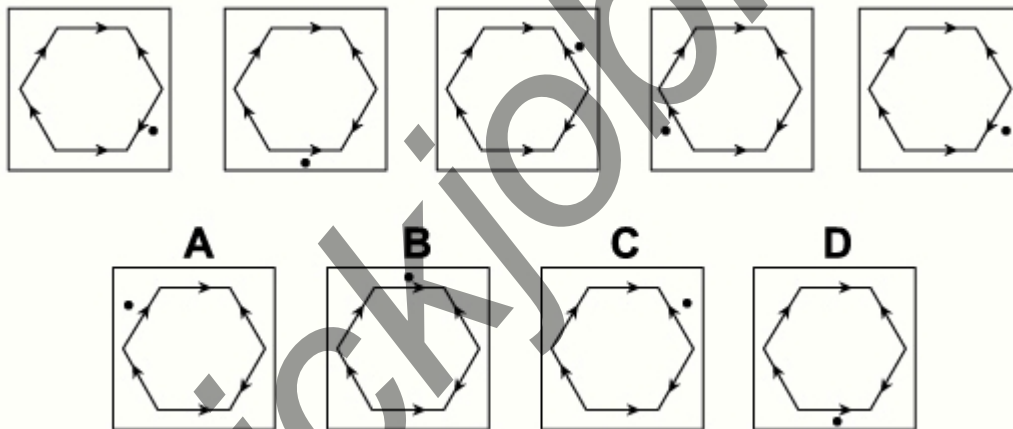
Which of the options should replace the question mark (?) to complete the sequence?

Correct answer: B

Explanation

In this question each diagram has two polygons. The total number of sides of the two polygons increases by one each time.

For the missing diagram of the sequence, the total number of sides should be eleven. The correct answer is B which shows a heptagon (seven sides) and a rectangle (four sides)



Question 8

Which of the options is the next shape in the sequence?

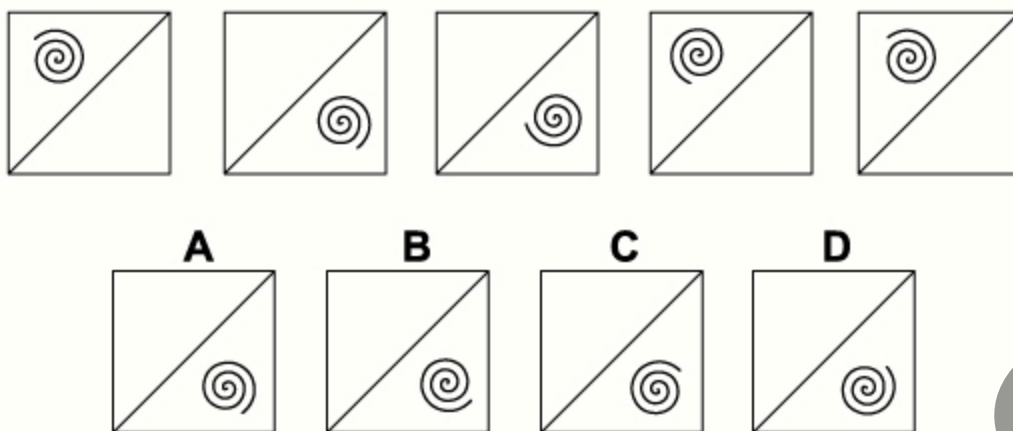
Correct answer: C

Explanation

In this question the dot rotates around the perimeter of the regular hexagon, always rotating in the direction indicated by the arrow.

The numbers of places it rotates are: 1 the first time, 2 the second time, 3 the third time etc.

To obtain the next diagram of the sequence, therefore, the dot should rotate 5 places in the direction indicated by the arrow, which is clockwise. The correct answer is C.



Question 9

Which of the options is the next shape in the sequence?

Correct answer: A

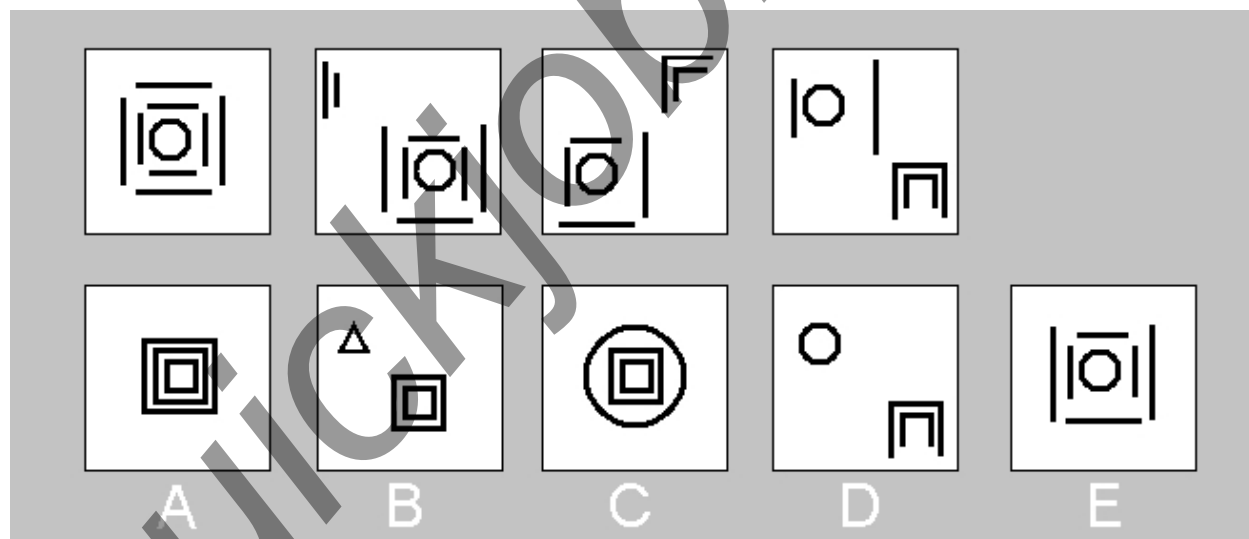
Explanation

In this question there are two rules to follow that are applied alternately.

The first rule is that the spiral is reflected in the diagonal shown.

The second rule is that the spiral rotates by 90° clockwise.

To obtain the next diagram of the sequence, the first rule should be applied next and the correct answer is A



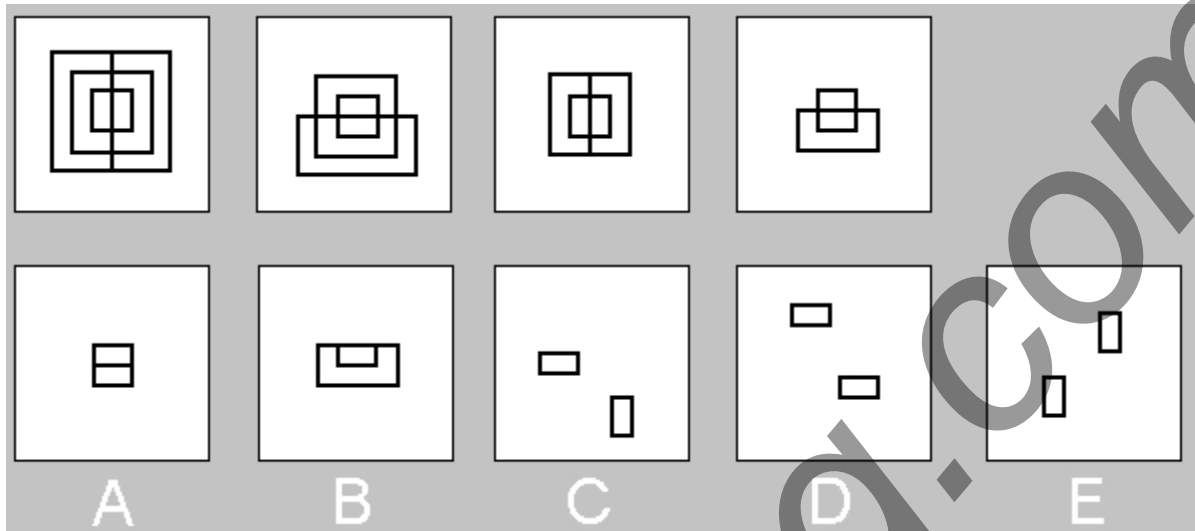
Question 10

Which of the options is the next shape in the sequence?

Correct answer: C

Explanation

Each box contains 8 straight lines and a circle Only answer C contains 8 straight lines and a circle



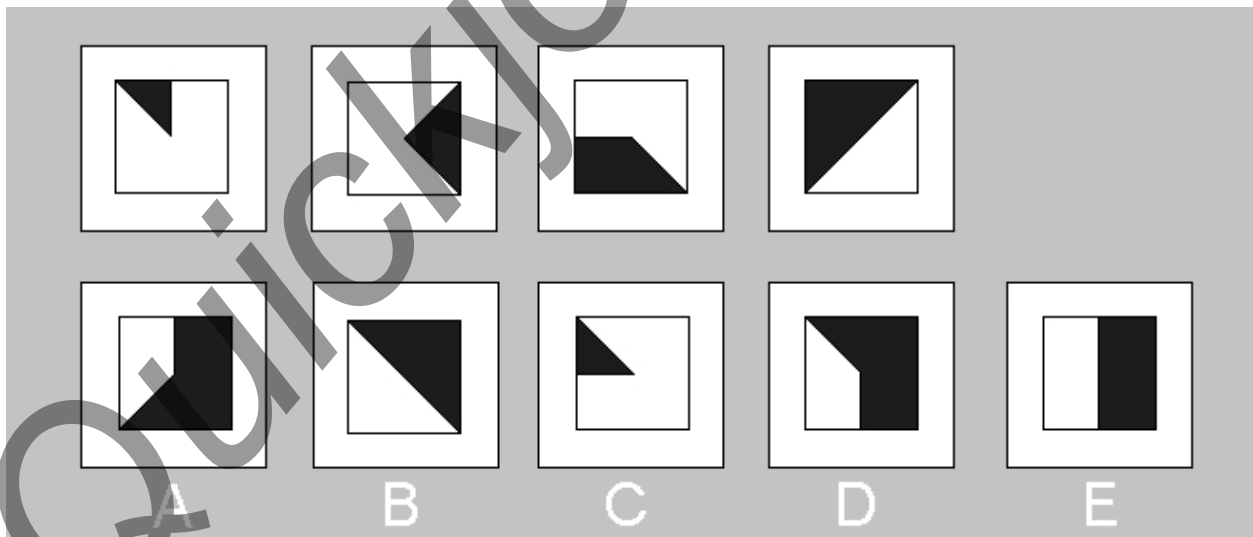
Question 11

Which of the options is the next shape in the sequence?

Correct answer: E

Explanation

The innermost two rectangles are vertical, then horizontal, then vertical again then horizontal, So in the answer they must both be vertical therefore E is the answer



Question 12 (id: 11326)

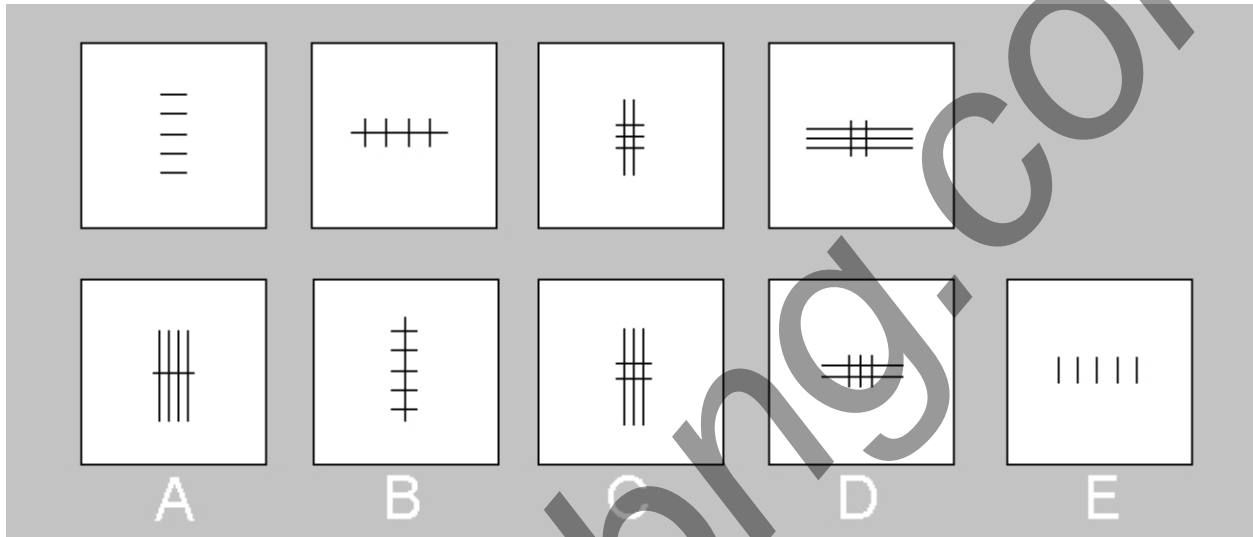
Which of the options is the next shape in the sequence?

Correct answer: D

Explanation

Each box increments by one blue segment (one eighth of the square). So there are 4 segments in box four (half the square is filled). So there must be 5 blue segments ($\frac{5}{8}$ th of the square) in the answer which leaves us with A or D.

But the diagonal edge of the first segment is also rotating clockwise by 90° each time, so it should be aligned NW in the answer. therefore the answer is D



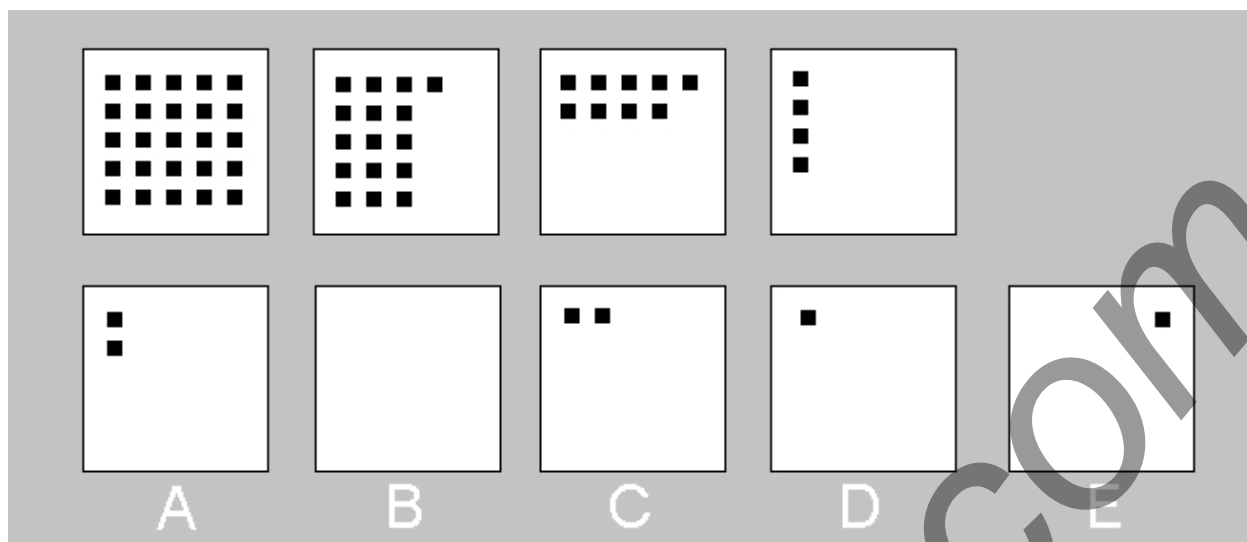
Question 13

Which of the options is the next shape in the sequence?

Correct answer: A

Explanation

The first box has 5 short lines and no long lines, the second box: 4 short & 1 long, the third box: 3 short & 2 long, the fourth box 2 short and 3 long. So each time there is one more long line and one less short line, so in the fifth box there will be 1 short and 4 long lines: the answer is A



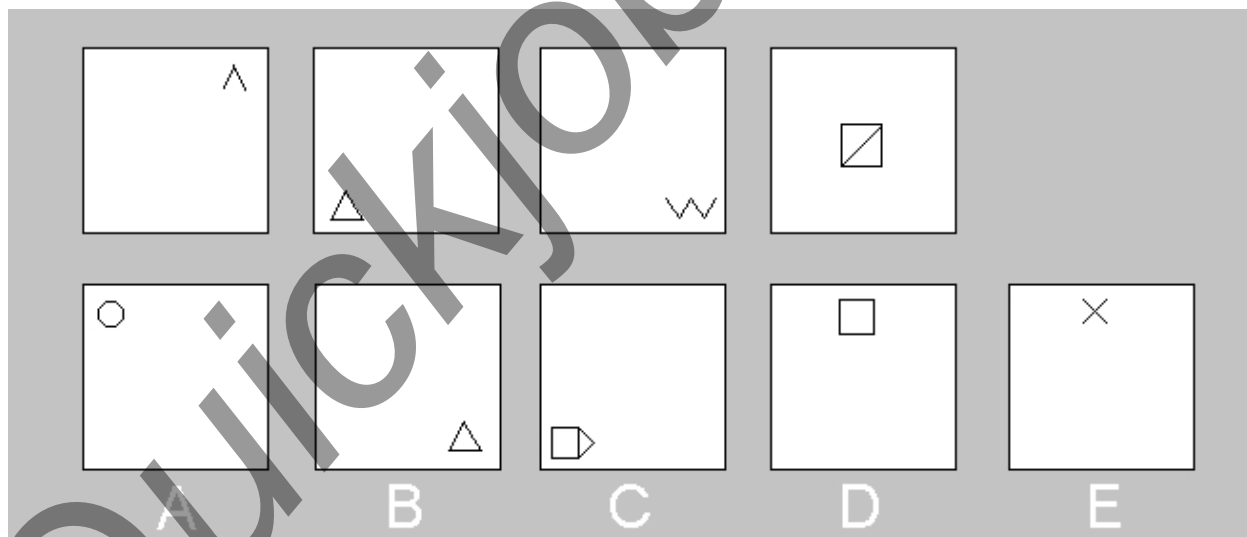
Question 14

Which of the options is the next shape in the sequence?

Correct answer: D

Explanation

The first square has 25 black squares, the second has 16, the third 9, the fourth 4 and so the 5th will have one square (reducing sequence of the square numbers 25, 16, 9, 4, 1). Also squares are removed from the right and from the bottom, so the final square will be in the top left corner, thus the answer is D



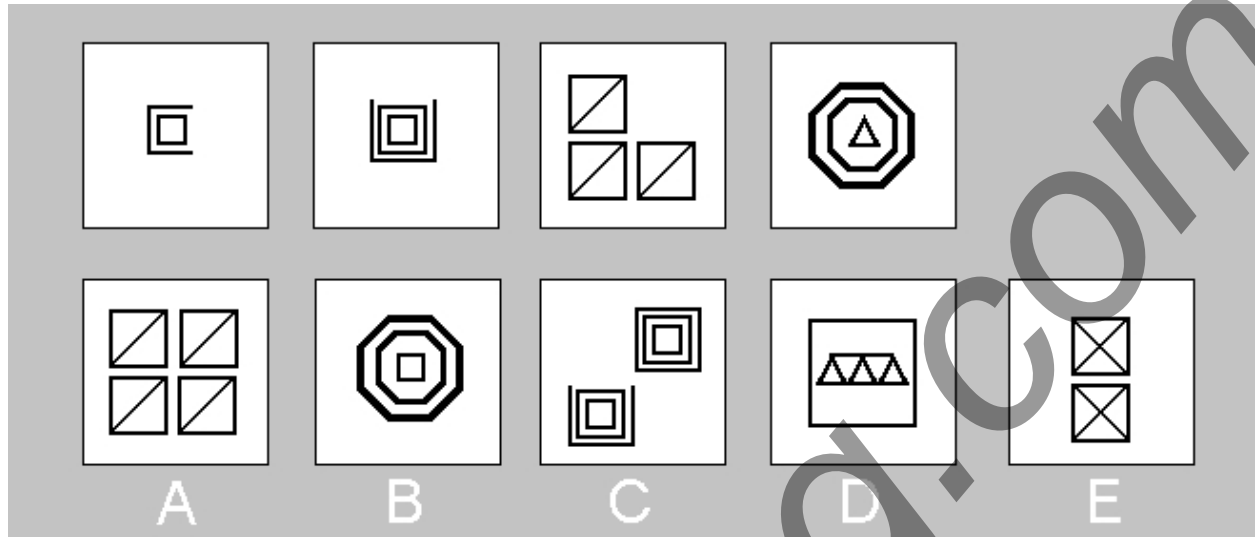
Question 15

Which of the options is the next shape in the sequence?

Correct answer: C

Explanation

The first box has two lines, the second 3, the third 4, the fourth 5 and so the fifth box will have six lines, so the answer is C.

**Question 16**

Which of the options is the next shape in the sequence?

Correct answer: C

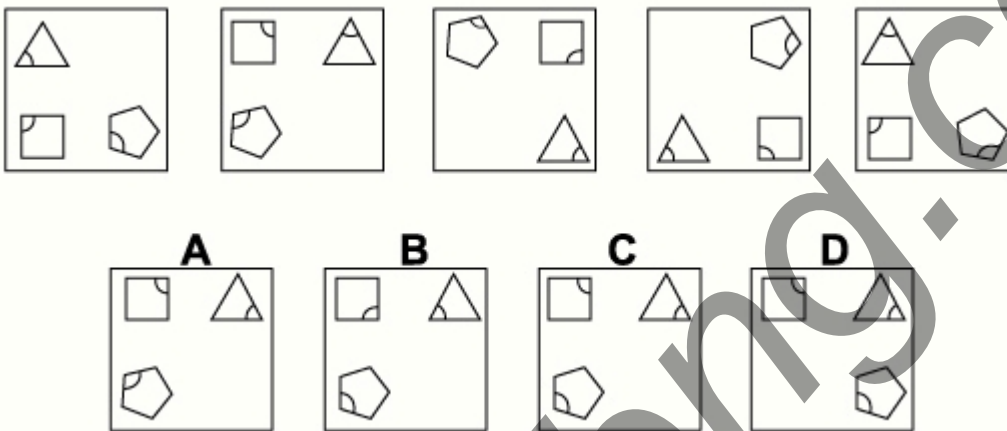
Explanation

The first box has 7 straight lines, the second 11, the third 15, the fourth 19 and so the fifth box will have 23 lines, so the answer is C

TEST TWO:

Abstract Reasoning - Instructions

In this section you will have to answer questions that require you to follow the logic underlying a set of figures. In each question, you will need to determine which of the possible answers best matches the next figure in the sequence, or replaces a missing figure in the sequence.



Question 1

Which of the options is the next shape in the sequence?

Correct answer: C

Explanation

Everything rotates clockwise.

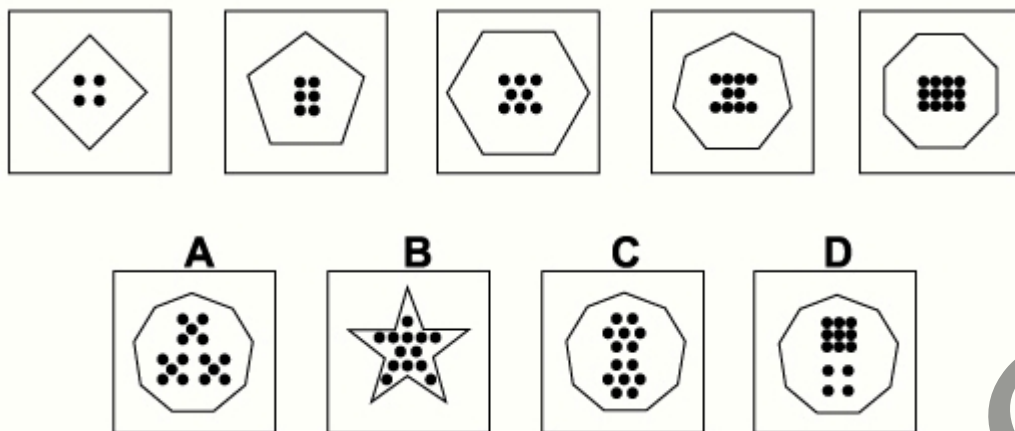
The equilateral triangle rotates about its own centre by 120° each time.

The square rotates about its own centre by 90° each time.

The regular pentagon rotates about its own centre by 108° each time.

Simultaneously the three shapes rotate by 90° each time about the centre of the large square.

Following these rules, the next diagram of the sequence must be C.



Question 2

Which of the options is the next shape in the sequence?

Correct answer: C

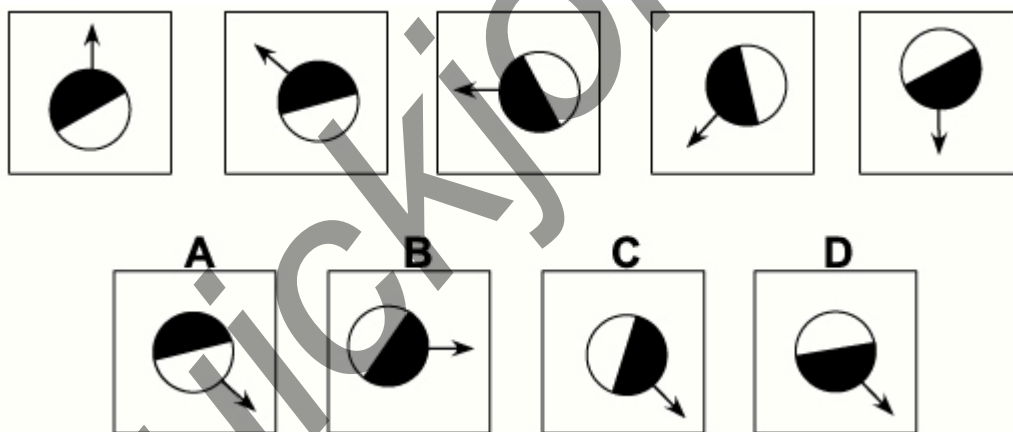
Explanation

There are two rules to follow.

The first rule is that the shapes are regular polygons, with the number of sides increasing by 1 each time. Following this rule, for the next diagram in the sequence, there should be a regular nonagon (nine-sided polygon). The correct answer, therefore, could be A, C or D.

The other rule is that the number of dots inside the polygons increases by two each time.

For the next diagram in the sequence, therefore, there should be 14 dots. The correct answer, therefore, is C



Question 3

Which of the options is the next shape in the sequence?

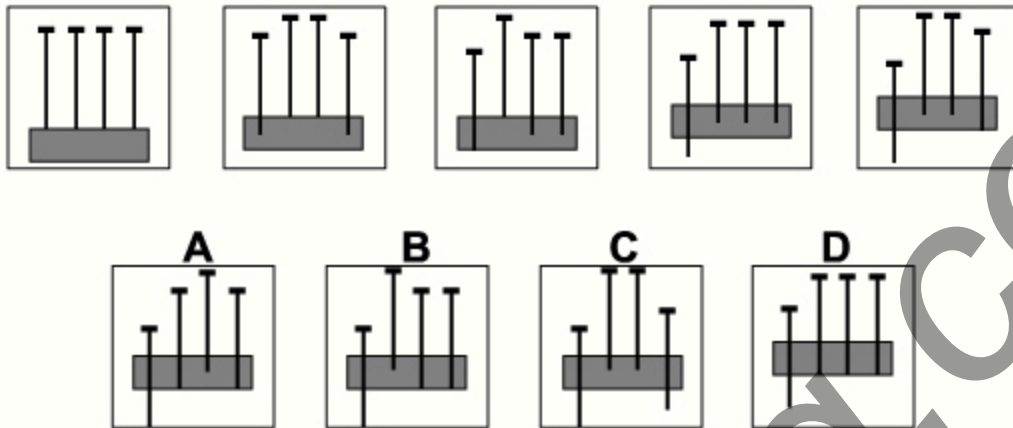
Correct answer: D

Explanation

In this question there are two rules that are performed simultaneously.

The first rule is that the shape is reflected in the axis that follows the direction of the arrow.

The second rule is that the shape is rotated by 45° anticlockwise each time.
Following the second rule, the answer could be A, C or D. But the first rule tells us that the correct answer must be D. In A, the wrong half of the circle is coloured black. In C, the shape has not been reflected.



Question 4

Which of the options is the next shape in the sequence?

Correct answer: B

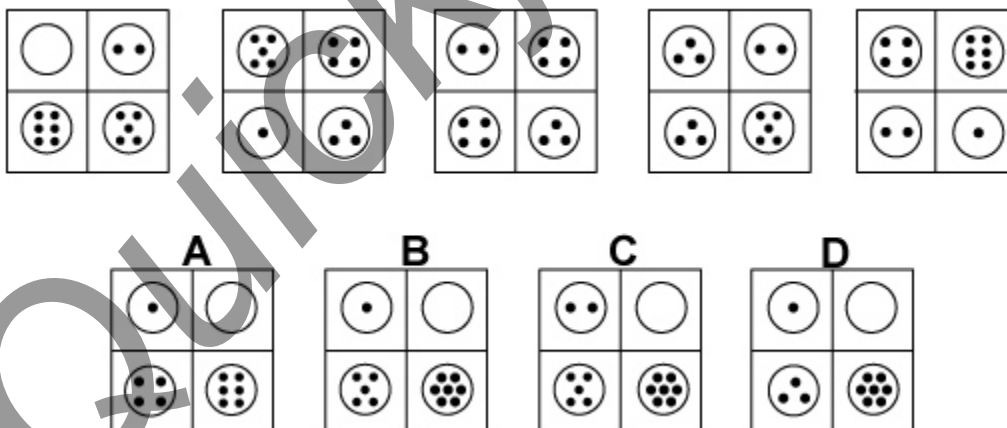
Explanation

There is a block of wood and four nails.

Each time the first nail (on the left) and one other nail are hit with a hammer - the first time, the first and fourth nails are hit, the second time the first and third nails are hit, the next time the first and second, then back to the first and fourth etc.

For the next diagram of the sequence, therefore, the first and third nails should be hit.

The correct answer, therefore, is B.



Question 5

Which of the options is the next shape in the sequence?

Correct answer: B

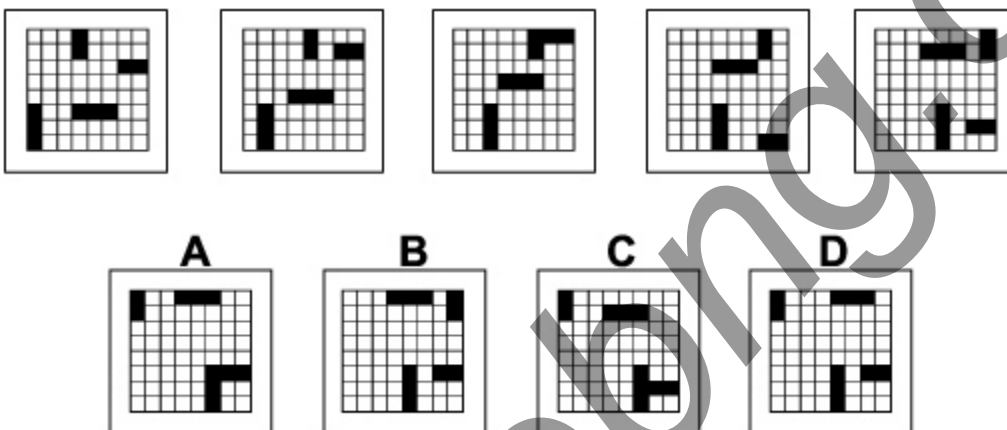
Explanation

There are two rules to follow that are applied simultaneously.

The first rule is that the top and bottom rows interchange each time.

The second rule is that the numbers of dots in the circles that started in the top row of the first diagram increase by one each time, whereas the numbers of dots in the circles that started in the bottom row of the first diagram decrease by one each time.

Following these rules simultaneously, for the next diagram of the sequence, the circles in top row should have one dot and zero dots respectively and the circles in the bottom row should have five dots and seven dots respectively. The correct answer, therefore, is B



Question 6

Which of the options is the next shape in the sequence?

Correct answer: A

Explanation

In this question there is a grid with two horizontal rectangles and two vertical rectangles.

From one diagram to the next the horizontal rectangles always move one square up the grid.

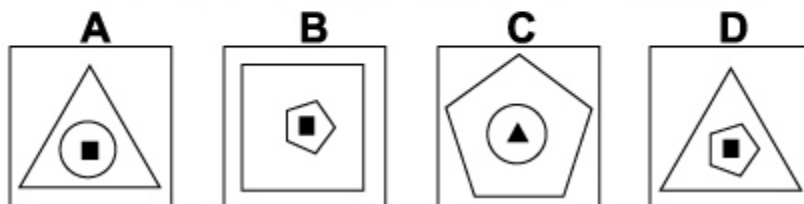
When they reach the top row of the grid, they then move to the bottom row in the next diagram.

From one diagram to the next the vertical rectangles always move one square to the right in the grid. When they reach the right column of the grid, they then move to the left column in the next diagram.

Following these rules, the correct answer is A



Which of the following replaces the question mark in the sequence?



Question 7

Which of the options should replace the question mark (?) to complete the sequence?

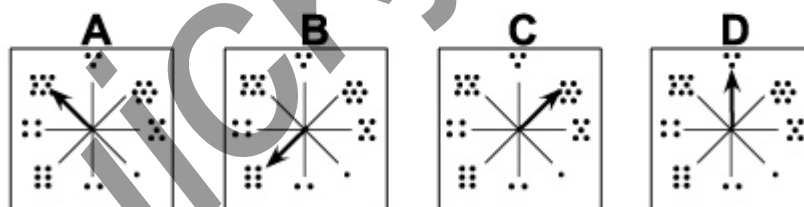
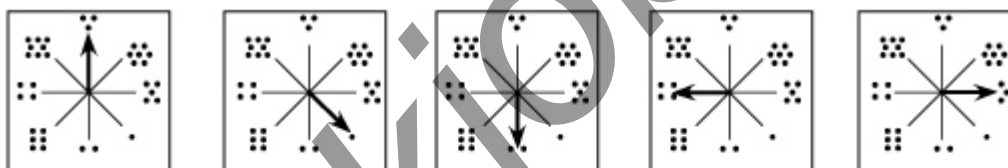
Correct answer: D

Explanation

Each diagram has three shapes, one inside the other, with the inner shape coloured black.

From one diagram to the next, the middle shape of the three becomes the outer shape, the inner shape becomes the middle shape but is no longer shaded black, and a new black shape is placed in the centre.

Following these rules, for the missing diagram of the sequence, the outer shape should be a triangle, the middle shape should be a pentagon and the inner shape should be a black square (the same shape as the middle shape in the fourth diagram). The correct answer, therefore, is D



Question 8

Which of the options is the next shape in the sequence?

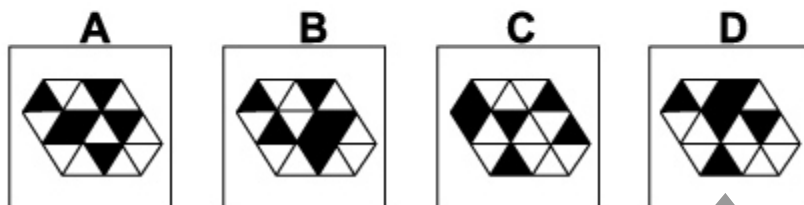
Correct answer: A

Explanation

In this question, the arrow moves clockwise around the dial, the number of places it moves being

determined by the number of dots from the previous diagram.

Following this rule, for the next diagram in the sequence, the arrow should move clockwise by five places, and the correct answer is A.



Question 9

Which of the options is the next shape in the sequence?

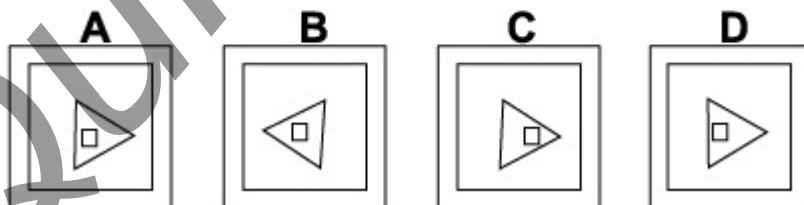
Correct answer: A

Explanation

In this question there is a grid of sixteen equilateral triangles, some coloured black and some white. Fourteen of the triangles have either an edge or a vertex touching the outside of the grid. The colours of these fourteen triangles move around the edge of the grid, moving one place anticlockwise each time.

The two triangles in the centre of the grid (one black and one white) remain unchanged from one diagram to the next.

Following these rules, the next diagram in the sequence must be A.



Question 10

Which of the options is the next shape in the sequence?

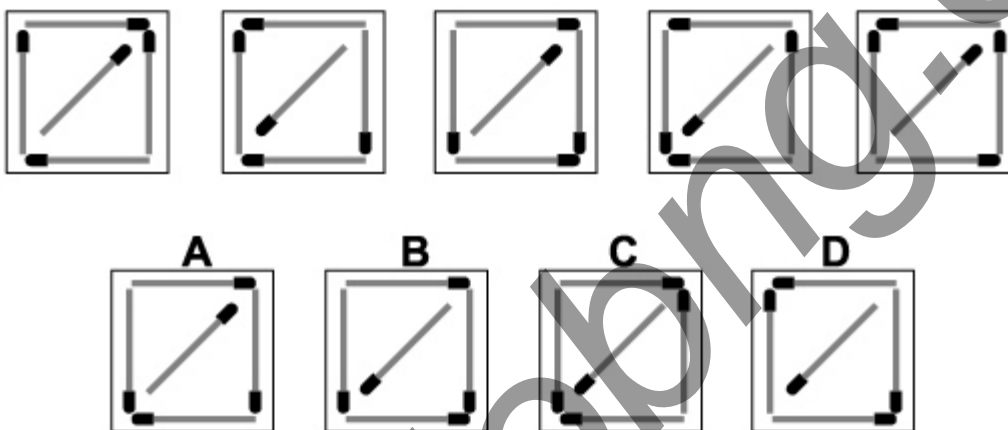
Correct answer: C

Explanation

In this question there is a small square inside an equilateral triangle, which is itself inside a larger square. There are two rules to follow.

The first rule is that the large square and the equilateral triangle rotate about the centre point by 90° clockwise each time. Following this rule, in the next diagram of the sequence, the equilateral triangle should point towards the right. The correct answer, therefore, could be A, C or D.

The second rule concerns the small square that can occupy three positions in turn lying on one of the three axes of symmetry of the equilateral triangle - on its base, at its centre, or touching two edges of the triangle near to its vertex. Following this rule, for the next diagram of the sequence, the small square should be near to the vertex of the triangle. The correct answer, therefore, is C.

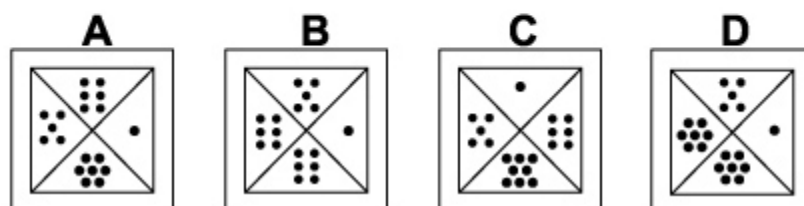
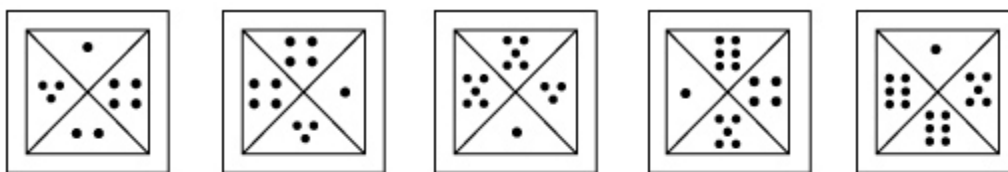
**Question 11**

Which of the options is the next shape in the sequence?

Correct answer: B

Explanation

There are five matchsticks. From one diagram to the next, the matchsticks change direction if their heads are touching; otherwise they stay as they are. Following these rules, the next diagram of the sequence is B



Question 12

Which of the options is the next shape in the sequence?

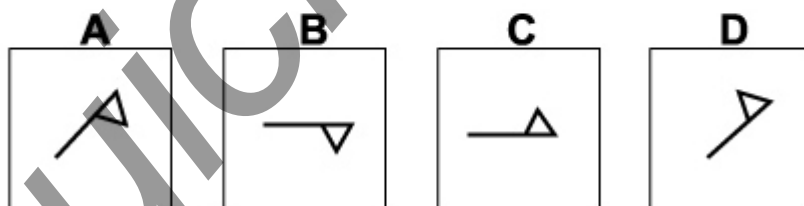
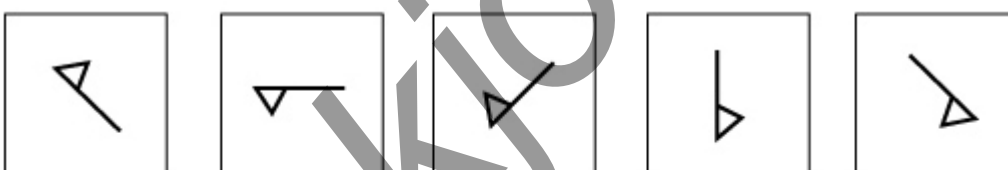
Correct answer: D

Explanation

There is a square divided into four quarters. There are two rules to follow.

The first rule is that the quarter containing one dot and the next quarter to it in a clockwise sense, interchange. Following this rule, for the next diagram of the sequence, the quarter containing one dot should interchange with the quarter containing five dots. The correct answer, therefore, could be B or D.

The second rule is that the numbers of dots in each of the other two quarters increases by one each time. Following this rule, the two quarters with six dots should each increase to seven dots. The correct answer, therefore, is D.



Question 13

Which of the options is the next shape in the sequence?

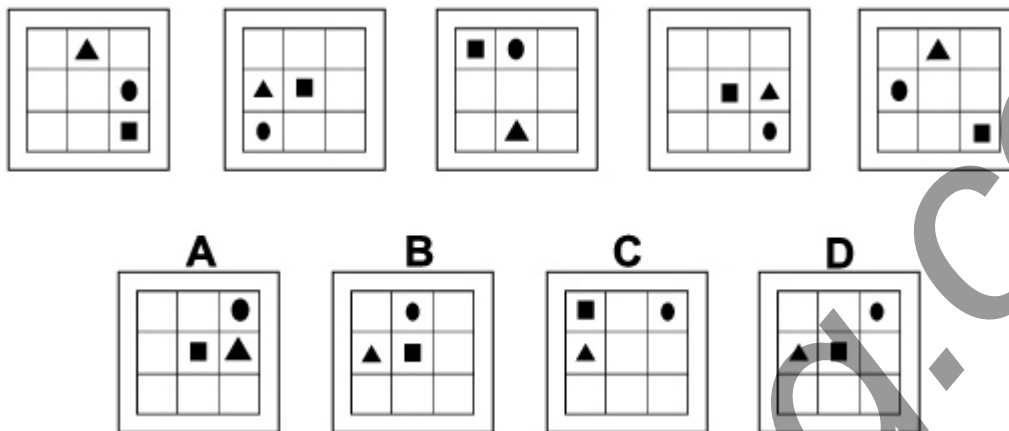
Correct answer: C

Explanation

In this question there are two rules to follow.

The first rule is that the flag rotates by 45° anticlockwise each time. Following this rule, the next diagram in the sequence could be B or C.

The second rule is that the flag is reflected in the line of the flagpole each time. Following this rule, the correct answer must be C



Question 14

Which of the options is the next shape in the sequence?

Correct answer: D

Explanation

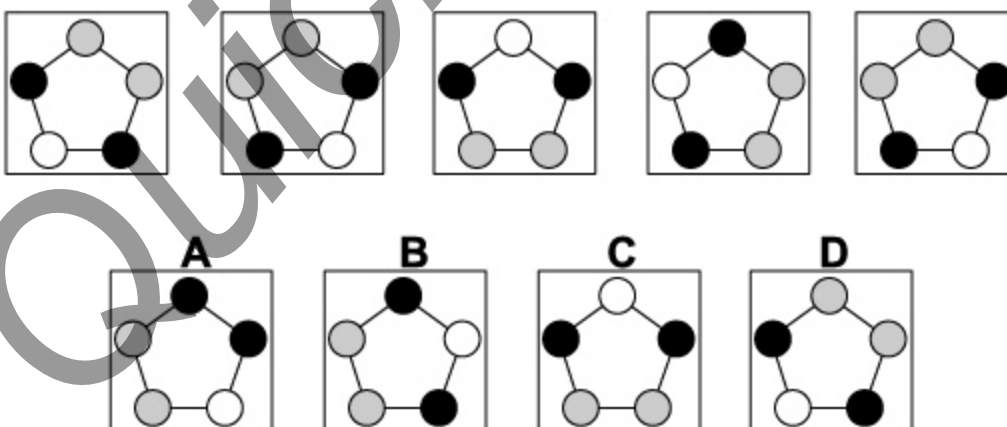
In this question each of the three shapes has its own rule to follow.

The triangle moves around the four squares of the grid at the centre of each edge, rotating by 90° anticlockwise each time.

The square moves backwards and forwards along one diagonal of the grid.

The dot moves clockwise around the outer eight squares of the grid, moving forwards by three spaces each time.

Following these rules, the correct answer is D.



Question 15

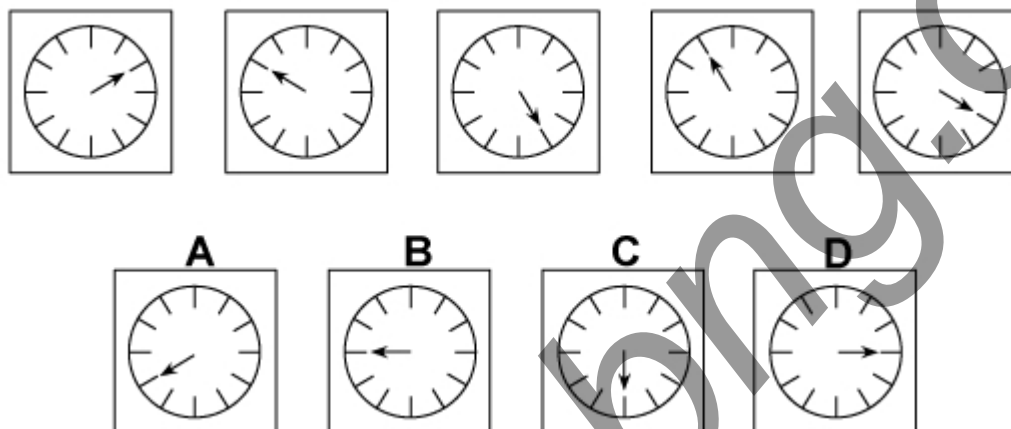
Which of the options is the next shape in the sequence?

Correct answer: B

Explanation

This question is about reflection. The shape (not considering the colours) has five lines of symmetry. The shape (with colours) is reflected successively in each line of symmetry - starting with the vertical line of symmetry, then the next line of symmetry clockwise from the vertical line, then the next clockwise, and so on.

Following this rule, to obtain the next diagram of the sequence, we should reflect in the line of symmetry that passes through the circle in the top left of the shape. The correct answer, therefore, is B



Question 16

Which of the options is the next shape in the sequence?

Correct answer: A

Explanation

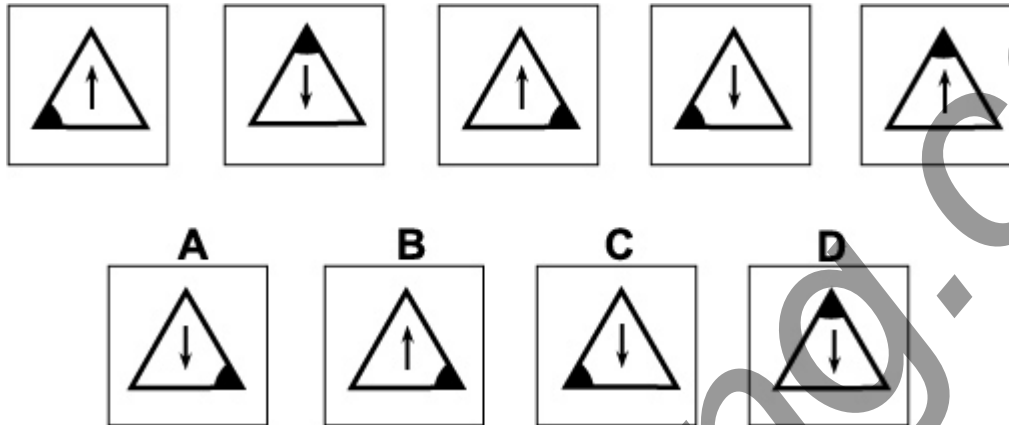
In this question the hand rotates anticlockwise around the dial, the first time by 120° , the second time by 150° , etc. The number of degrees by which it rotates increases by 30° each time.

To obtain the next diagram of the sequence, therefore, the hand should rotate by 240° anticlockwise from four o'clock to eight o'clock. The correct answer, therefore, is A.

TEST THREE:

Abstract Reasoning - Instructions

In this section you will have to answer questions that require you to follow the logic underlying a set of figures. In each question, you will need to determine which of the possible answers best matches the next figure in the sequence, or replaces a missing figure in the sequence.



Question 1

Which of the options is the next shape in the sequence?

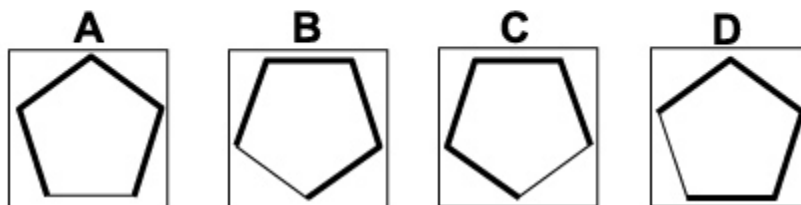
Correct answer: A

Explanation

There are two rules to follow:

The first rule is that the direction of the arrow is reversed each time. Following this rule, in the next diagram of the sequence the arrow should point vertically downwards. The correct answer, therefore, could be A, C or D.

The second rule is that the triangle rotates by 120° clockwise each time. Following this rule, in the next diagram of the sequence the shaded angle will be in the bottom right corner of the triangle. The correct answer, therefore, is A.



Question 2

Which of the options is the next shape in the sequence?

Correct answer: A

Explanation

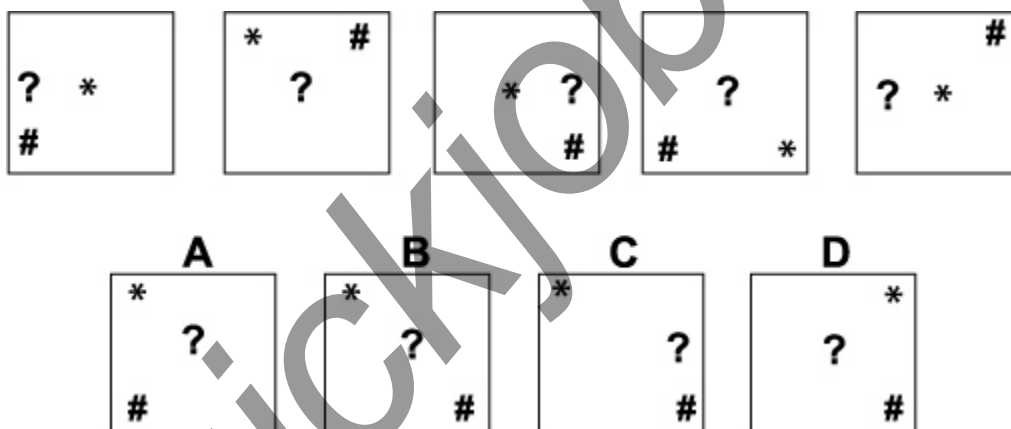
There is a regular pentagon with one edge thinner than the others. There are three rules that are applied one after the other:

The first rule is a vertical flip.

The second rule is a horizontal flip.

The third rule is a rotation of 72° about the centre.

The second rule needs to be applied next, therefore, the correct answer is A.



Question 3

Which of the options is the next shape in the sequence?

Correct answer: B

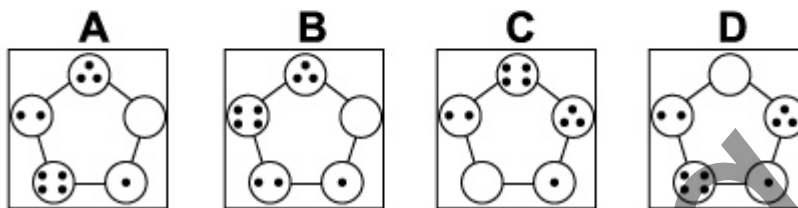
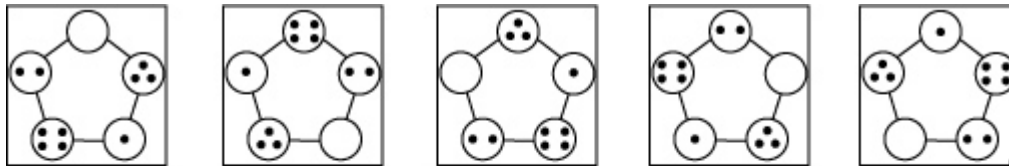
Explanation

The three shapes each have their own rule to follow and move around the square in an imaginary 3 by 3 grid.

The question mark (?) always stays in the middle row of the 3 by 3 grid and moves one place each time, changing direction when it reaches an edge of the square.

The asterisk (*) always stays on the diagonal going from the top left of the square to the bottom right, and moves one place each time, changing direction when it reaches a corner of the square. The hash symbol (#) moves clockwise around a triangle with vertices at the bottom left, top right and bottom right corners of the square.

Following these rules, the next diagram in the sequence is B.



Question 4

Which of the options is the next shape in the sequence?

Correct answer: D

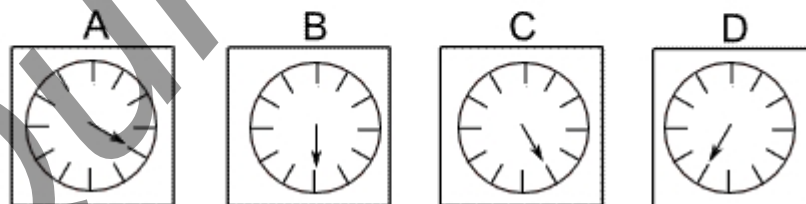
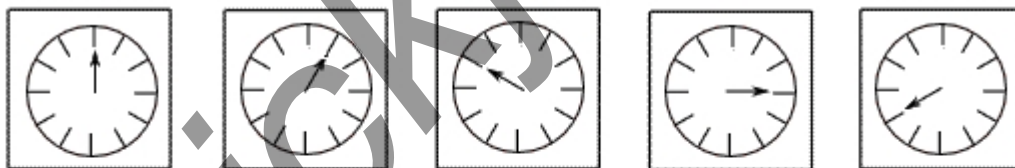
Explanation

There are two rules to follow:

The first rule is that the pentagonal shape rotates through 72° anticlockwise each time.

The second rule is that, at the same time, the number of dots increases by 1, with 4 dots becoming 0 dots.

When both these rules are applied simultaneously, the next diagram in the sequence is D.



Question 5

Which of the options is the next shape in the sequence?

Correct answer: C

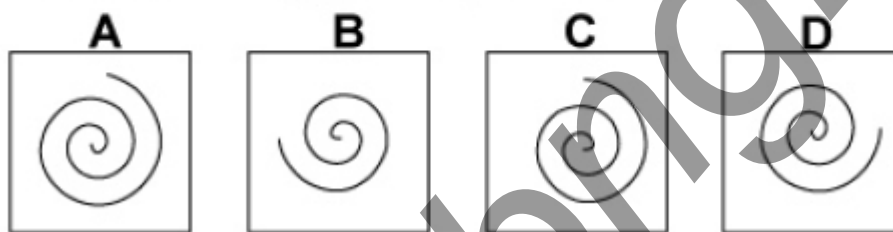
Explanation

In this question the arrow rotates around the clock face alternately clockwise and anticlockwise and the angle of rotation is always an odd multiple of 30° .

Thus the first rotation is 30° ($1 \times 30^\circ$) clockwise; the next is 90° ($3 \times 30^\circ$) anticlockwise, the next 150° ($5 \times 30^\circ$) clockwise, and the next 210° ($7 \times 30^\circ$) anticlockwise. The final rotation to get the next diagram in the sequence will therefore be 270° ($9 \times 30^\circ$) clockwise, and the correct answer is C



Which of the following replaces the question mark in the sequence?



Question 6

Which of the options should replace the question mark (?) to complete the sequence?

Correct answer: D

Explanation

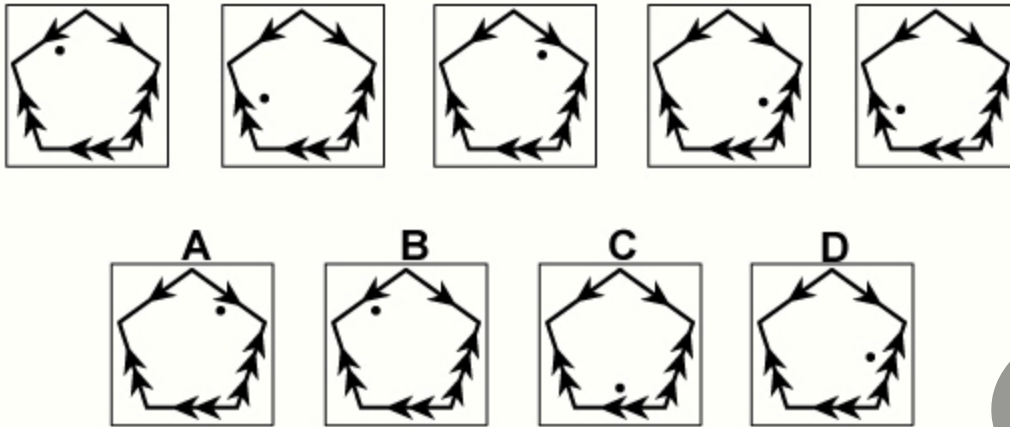
Two rules apply:

The first rule is that a 90° arc is erased every time from the outer extremity of the spiral.

Following this rule, the correct answer could be B, C or D.

The second rule is that the remaining part of the spiral is rotated by 90° clockwise each time.

Following this rule, the correct answer must be D



Question 7

Which of the options is the next shape in the sequence?

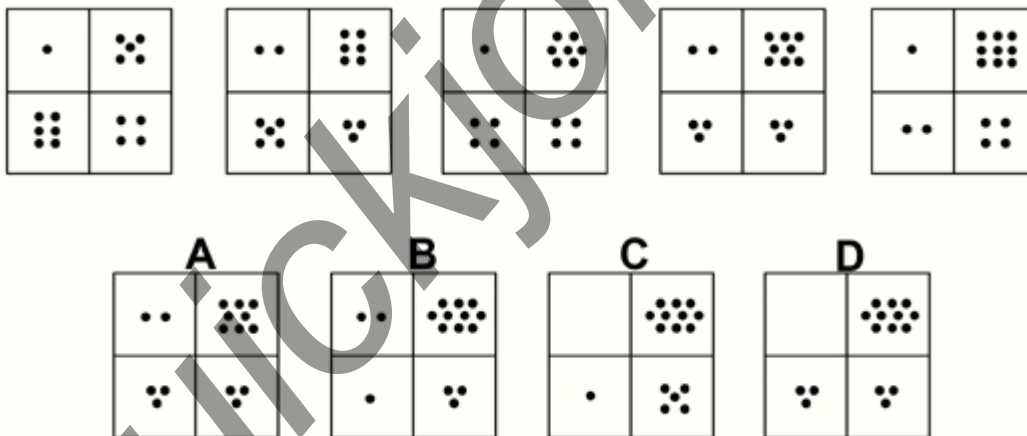
Correct answer: A

Explanation

In this question the dot rotates around the inside of the pentagon. The direction of the arrow from its previous position indicates whether the rotation is clockwise or anticlockwise. The number of arrowheads on the arrow of its previous position indicates the number of fifths of a complete turn by which it should rotate.

For the next diagram in the sequence, therefore, it should rotate two fifths of a complete turn in a clockwise sense.

The correct answer, therefore, is A



Question 8

Which of the options is the next shape in the sequence?

Correct answer: B

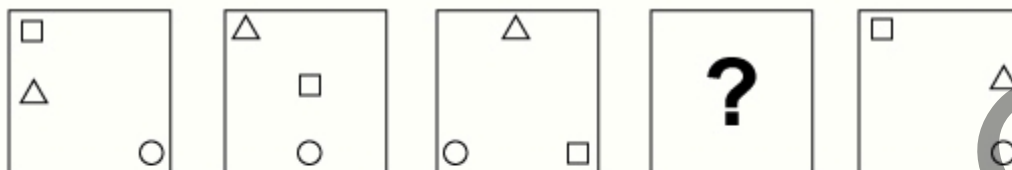
Explanation

There are two rules to follow that are applied alternately.

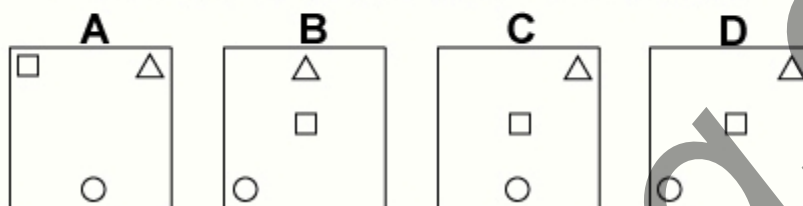
The first rule is that the numbers of dots in the top row increase by one while the numbers of dots in the second row decrease by one.

The second rule is that the numbers of dots in the first column decrease by one while the number of dots in the second column increases by one.

The next rule to follow therefore is the first rule. The correct answer, therefore, is B.



Which of the following replaces the question mark in the sequence?



Question 9 (id: 11291)

Which of the options should replace the question mark (?) to complete the sequence?

Correct answer: C

Explanation

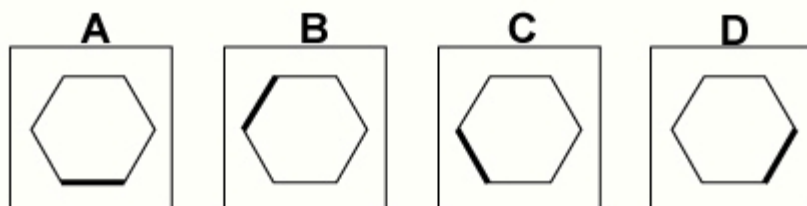
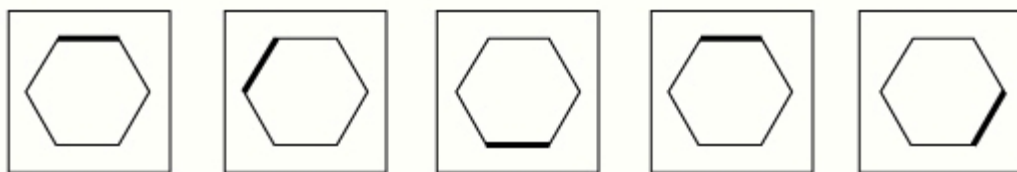
Each of the three shapes has its own rule to follow.

The triangle rotates clockwise around the perimeter of the square occupying eight positions, moving one place each time. Following this rule, for the missing diagram of the sequence, the triangle should be in the top right corner of the square. The correct answer, therefore, could be A, C or D.

The small square occupies the three positions on the main diagonal of the large square that stretches from the top left corner to the bottom right corner. It also moves one place each time and keeps going backwards and forwards along the diagonal. Following, this rule, for the missing diagram of the sequence, the small square should be in the centre of the large square. The correct answer, therefore, could be C or D.

The circle moves along the bottom edge of the square, occupying three positions one place at a time, and keeps going backwards and forwards along the bottom edge. Following this rule, for the missing diagram of the sequence, the circle should be in the centre of the bottom edge.

The correct answer, therefore, is C



Question 10

Which of the options is the next shape in the sequence?

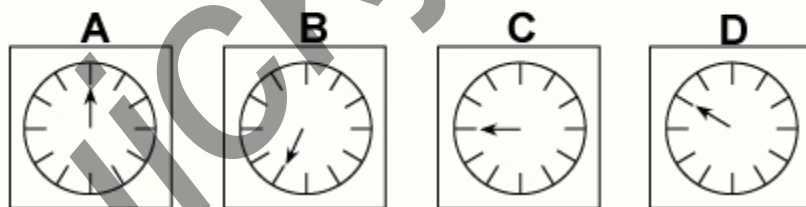
Correct answer: A

Explanation

In this question there is a regular hexagon with one edge shaded darker than the others. The rule is that the hexagon rotates anticlockwise about its centre point by multiples of 60° - the first time by 60° , the second by $2 \times 60^\circ = 120^\circ$, the third by $3 \times 60^\circ = 180^\circ$ etc.

Following this rule, to obtain the next diagram in the sequence, the hexagon should rotate by $5 \times 60^\circ = 300^\circ$ anticlockwise.

The correct answer, therefore, is A.



Question 11

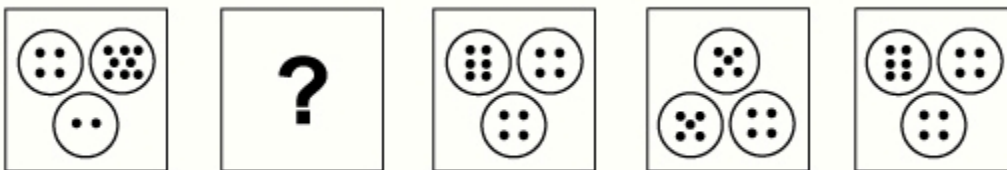
Which of the options is the next shape in the sequence?

Correct answer: D

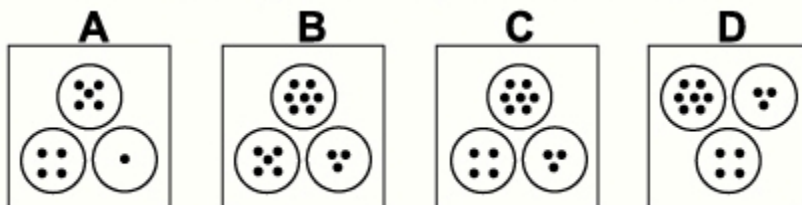
Explanation

The hand rotates clockwise around the clock face. The numbers of places it rotates successively are the numbers of the sequence of prime numbers 2, 3, 5, 7 etc.

The next prime number in the sequence is 11, so the next diagram in the sequence must be D (where the hand of the clock has progressed by 11 places clockwise).



Which of the following replaces the question mark in the sequence?



Question 12

Which of the options should replace the question mark (?) to complete the sequence?

Correct answer: C

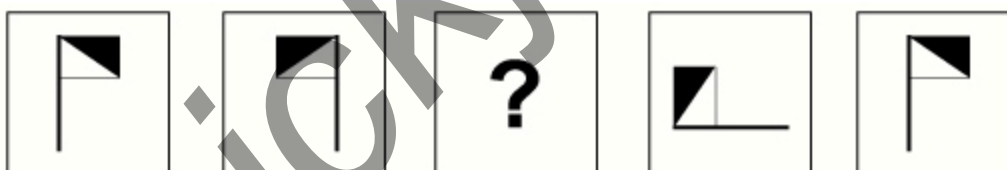
Explanation

In this question there are two rules to follow. The first rule concerns the circles which rotate by 60° anticlockwise each time.

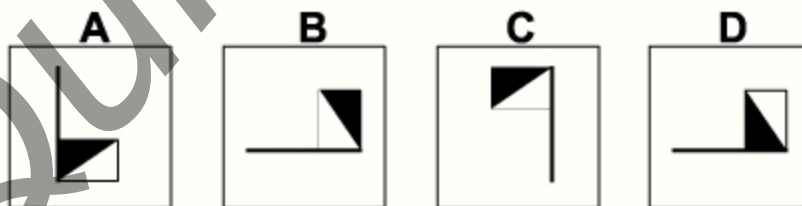
Following this rule, the missing diagram of the sequence could be A, B or C.

The second rule concerns the number of dots. The circle with four dots always has four dots. The circle that starts with two dots increases by one dot each time. The circle that starts with eight dots decreases by one each time.

Following this rule, the missing diagram of the sequence must be C



Which of the following replaces the question mark in the sequence?



Question 13

Which of the options should replace the question mark (?) to complete the sequence?

Correct answer: B

Explanation

Two rules are applied one after the other.

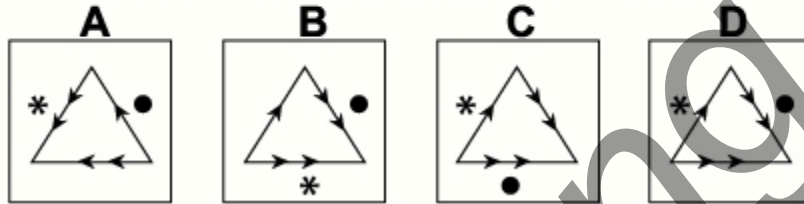
The first rule is that the flag is reflected in the vertical axis.

The second rule is that the flag is rotated by 90° clockwise.

To find the missing diagram of the sequence, the second rule should be applied. The correct answer, therefore, is B



Which of the following replaces the question mark in the sequence?



Question 14

Which of the options should replace the question mark (?) to complete the sequence?

Correct answer: D

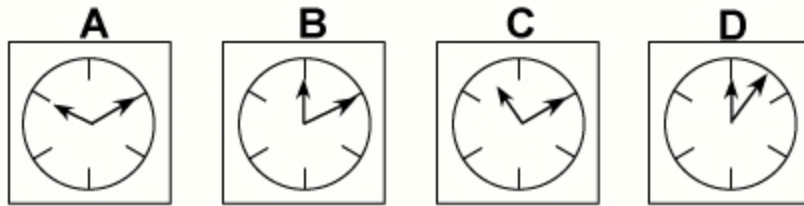
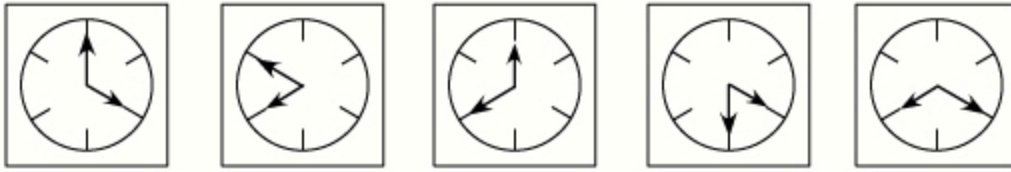
Explanation

There are two rules to follow.

The first rule is that the equilateral triangle and its arrows are reflected in the vertical axis from each diagram to the next. Following this rule, the missing diagram of the sequence could be B, C or D.

The second rule is that the asterisk and the dot move around the outside of the triangle by a number of places equal to, and direction given by, the arrowheads from the previous diagram. Following this rule, the dot will move to the right edge of the triangle and the asterisk will move to the left edge.

The missing diagram of the sequence, therefore, is D



Question 15

Which of the options is the next shape in the sequence?

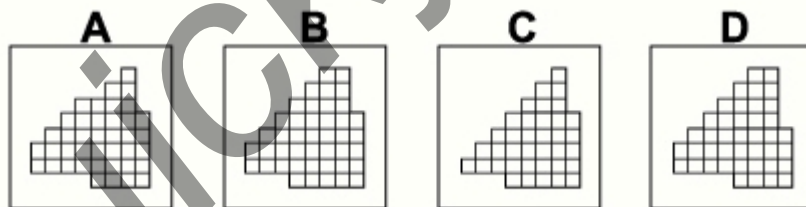
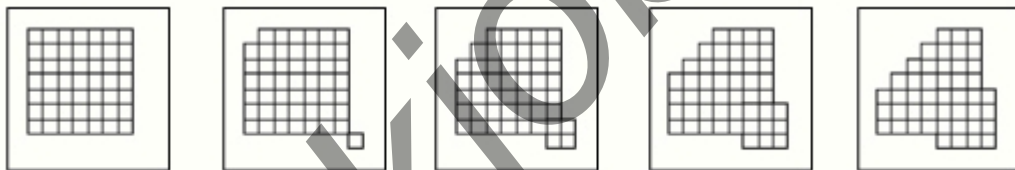
Correct answer: B

Explanation

In this question there is a dial with a long hand and a short hand.

The long hand rotates about the centre of the dial by 60° anticlockwise each time. Following this rule, for the next diagram in the sequence, the long hand should point towards two o'clock. The correct answer, therefore, could be A, B or C.

The short hand rotates about the centre of the dial by 120° clockwise each time. Following this rule, for the next diagram in the sequence, the short hand should point towards 12 o'clock. The correct answer, therefore, is B



Question 16

Which of the options is the next shape in the sequence?

Correct answer: B

Explanation

We start off with a 7 by 7 square grid. One square is removed from the top left corner of the grid

and added to the bottom right corner of the grid to start an 'L-shape'. From then onwards, at each stage of the sequence, a diagonal of squares is removed from the top left hand corner of the grid and two squares are joined to the bottom right hand corner to increase the size of the 'L-shape'. Following this rule, for the next diagram of the sequence, a diagonal of five squares should be removed from the top left corner of the grid and two squares added to the bottom right corner to make a 5 by 5 'L-shape'. The correct answer, therefore, is B

END OF ABSTRACT REASONING

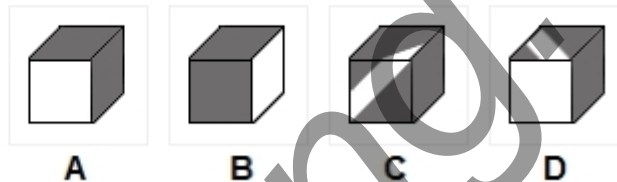
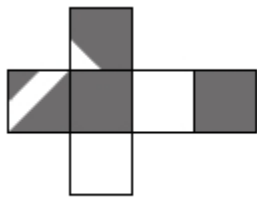
NIGERIA LNG APTITUDE TEST PAST QUESTIONS AND SOLUTIONS

Spatial Reasoning (15 mins for 15 qtns)

TEST ONE:

Spatial Reasoning - Instructions

There are 15 questions in this test and you should answer as many as you can.



Question 1

Which of the four possible options represent the cube in it's folded form?

Correct answer: C

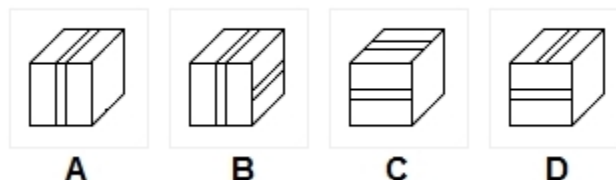
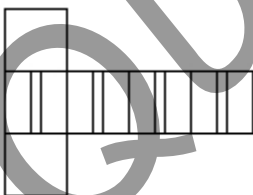
Explanation

Option A - the two facets that are fully shaded in gray are situated in opposing facets, therefore option A is incorrect.

Option B - the two facets that are fully shaded in gray are situated in opposing facets, therefore option B is incorrect.

Option C - the three facets appearing in the diagram represent the facet on the far left, the second facet from the left and the facet on top in the main diagram and they are situated in correct form in relation to each other.

Option D - the white diagonal appearing on the top facet is placed in a wrong position in relation to the other two facets (the gray shaded and white ones). This option is incorrect.



Question 2

Which of the four options represent the cube in it's folded form?

Correct answer: C

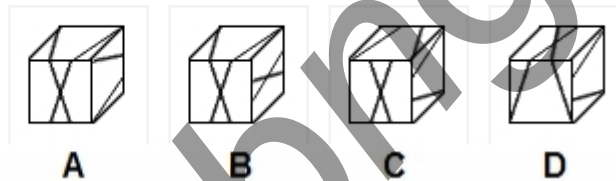
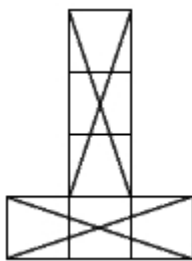
Explanation

Option A – from the main diagram it is clear that the lines appearing in four facets are parallel to each other. Therefore, these lines will never meet. In option A, these lines meet in the front and top facets. Therefore, option A is incorrect.

Option B – from the main diagram it is clear that the lines appearing in four facets are parallel to each other. Therefore, these lines will never meet. In option B, these lines meet in the front and top facets. Therefore, option B is incorrect.

Option C – this answer option is the only one which presents the lines on the facets as parallel to each other. This is the correct answer.

Option D – this answer option is incorrect since the lines running across two facets seem perpendicular to each other, this is impossible given that all lines in the main diagram are parallel to each other. Option D is incorrect



Question 3

Which of the four options represent the cube in it's folded form?

Correct answer: A

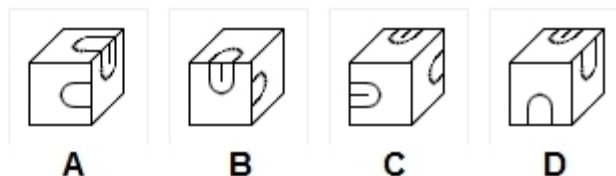
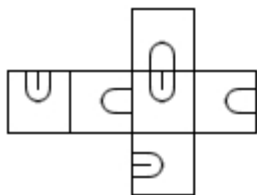
Explanation

Option A – The diagram above consists of two sets of lines that intersect. In this option the facet at the front represents the intersection which appears at the centre of the base of the diagram. The right facet represents the facet above it in the main diagram and the top facet represents the facet at the bottom on the left. This is the correct answer.

Option B - The two facets with the intersection (x) in the main diagram are situated on opposite facets of the cube and therefore option B is incorrect.

Option C – The top facet has an X, therefore in relation to it the lines on the facet on the right should be pointing down rather than to the front of the cube. This option is incorrect.

Option D – The facet in the front shows one of the intersections (x). Therefore the facet on top must show the continuation of the lines but it's evident that it doesn't. Option D is incorrect.

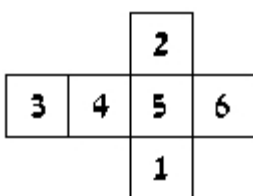


Question 4

which of the cubes will result from folding the pattern shown?

Correct answer: A

Explanation

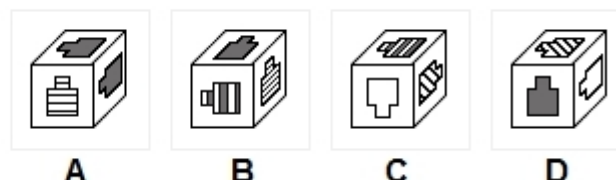


Option A – The facet at the front represents facet number 4, The top facet represents facet number 2 and the facet on the right represents facet number 5. This is the correct option.

Option B – If the top facet and the facet at the front represent facets 5 and 2 respectively then the shape on the right facet should be facing the opposite direction and located at the opposing side of the right facet. This option is incorrect.

Option C – There are two kinds of U shapes in this diagram. The two kinds are represented in the top facet and the facet on the right. In this option both U shapes are located at the same end of the facet (parallel to each other); looking at the main diagram it is evident that there aren't any facets in which both kinds of U shapes are situated next to each other. This option is incorrect.

Option D – If the facet at the front represents facet number 6 and the facet on the right represents facet number 2, then the top facet should represent facet number 5 yet it doesn't. This option is incorrect

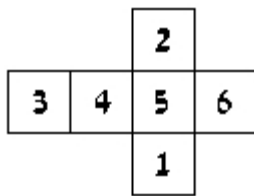


Question 5

Which of the cubes shown could be made from the pattern?

Correct answer: D

Explanation

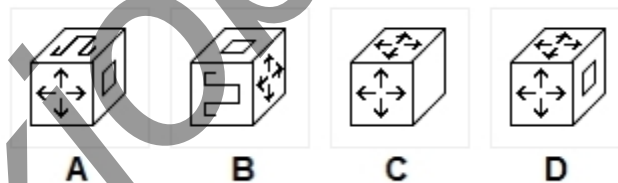
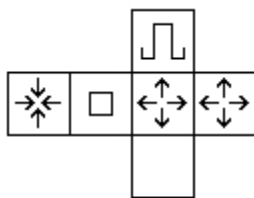


Option A – Each facet in the main diagram consists of a different patterned shape apart from two similar fully shaded shapes. In this option the front facet is represented by facet number 6 and the top facet, represented by facet number 2 is situated correctly in relation to it. However, the shaded shape in the facet on the right (facet number 1) should be facing the opposite direction. This option is incorrect.

Option B – The shapes on the facet at the front (facet number 5) and on the top facet (facet number 2) are situated in wrong form in relation to each other. The shaded figure at the top should be facing the opposite direction. This option is incorrect.

Option C – The shape on the right facet should be facet number 6 and should have horizontal lines rather than diagonal ones. The shapes on the facet at the front and on the top facet represent facet number 1 and 5 respectively. This option is incorrect.

Option D – The front, top and right facets are represented by facets 2, 3 and 1 respectively. This option is correct.

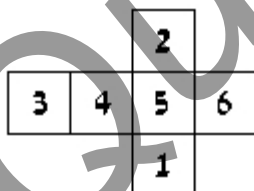


Question 6

Which of the cubes shown could be made from the pattern?

Correct answer: C

Explanation

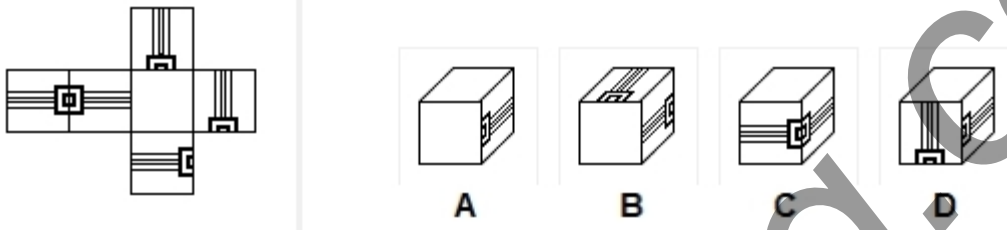


Option A – If the facet at the front and the facet on the top represent facets 5 and 2 respectively, then the facet on the right should be represented by facet number 6 rather than number 4. This option is incorrect.

Option B – If the facet on the right and the facet on the top represent facets 5 and 4 respectively, then the facet at the front should be represented by facet number 1 rather than number 2. This option is incorrect.

Option C – The facet at the front, top and right hand are represented by facets 5,6 and 1 respectively. This is the correct answer.

Option D – Facets 3, 4 and 5 are situated in consecutive order and therefore they could not appear alongside each other as they do in this option but rather one after the other. This option is incorrect.

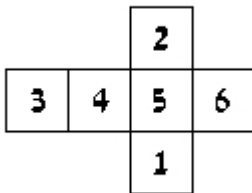


Question 7

Which of the cubes shown could be made from the pattern?

Correct answer: C

Explanation

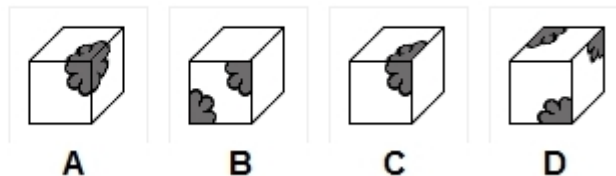
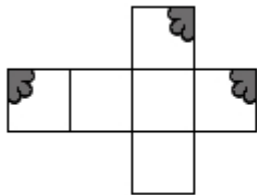


Option A – This option can be ruled out easily as it shows two blank facets and in the main diagram there is only one. This option is incorrect.

Option B – In the top facet and the one on the right the two shapes, resembling a belt with a buckle, face opposite directions. Looking in the main diagram it is clear that this situation is not feasible. This option is incorrect.

Option C – The front, top and facet on the right are represented by facets number 1, 5 and 6 respectively and the shapes are all situated in a correct manner. This option is correct.

Option D – The top and right facet are represented by facets number 5 and 6 respectively. This means that the facet at the front should be represented by facet number 1 with the 'buckle' end of the belt facing the right rather than the bottom. Therefore this option is incorrect.

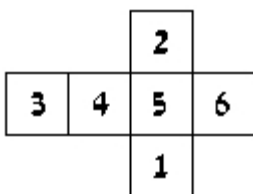


Question 8

Which of the cubes shown could be made from the pattern?

Correct answer: A

Explanation

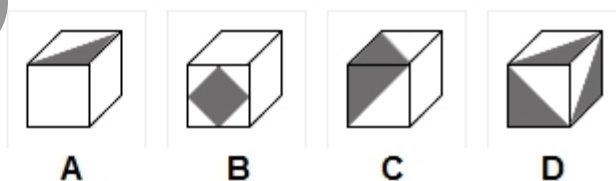
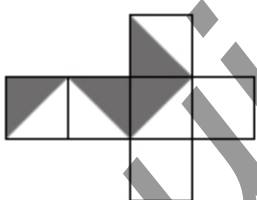


Option A – The main diagram consists of three blank facets and 3 facets with a 'floral' pattern. The facets seen in option A represent facets 6, 3 and 2 (front, top and right respectively). This is the correct answer.

Option B – In the front facet in the cube two parts of a flower are presented. When observing the main diagram it is clear that such a facet does not exist. This option is incorrect.

Option C – This option can be easily ruled since the top and front facets are represented by facets 3 and 6 and therefore just like in option A the right facet should be represented by facet 2. This option is incorrect.

Option D – The only option for all three facets with the flower part to be seen are if they combine to create a flower (like in option A). This option is incorrect.

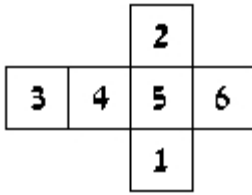


Question 9

Which of the cubes shown could be made from the pattern?

Correct answer: C

Explanation

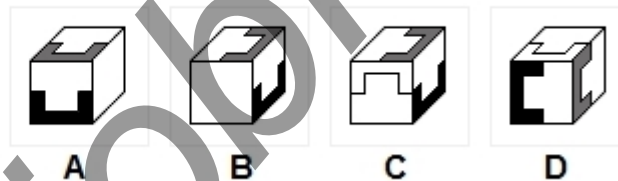
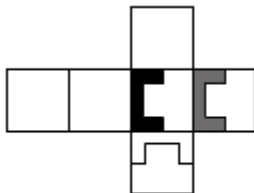


Option A – The main diagram has only two blank facets (1 and 6) – this means that the top facet shown in option number 1 can represent facets 3 or 5. Yet in both facets the shaded triangle should be in the opposite location in relation to the other two facets. This option is incorrect.

Option B – The front facet presents a gray diamond facet which does not appear in any of the facets in the main diagram. This option is incorrect.

Option C – The top and front facet represent facets 2 and 5 respectively. Therefore the facet on the right should be blank (facet 1). This option is correct.

Option D – All three shaded triangles in the three facets of the cube in option 3 are located in the same place on the facet. This situation is impossible given the locations of the shaded triangles in the main diagram. This option is incorrect.



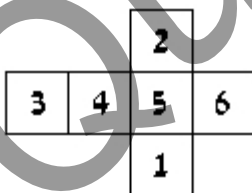
Question 10 (id: 11416)

Which of the cubes shown could be made from the pattern?

Your answer:

Correct answer: B

Explanation

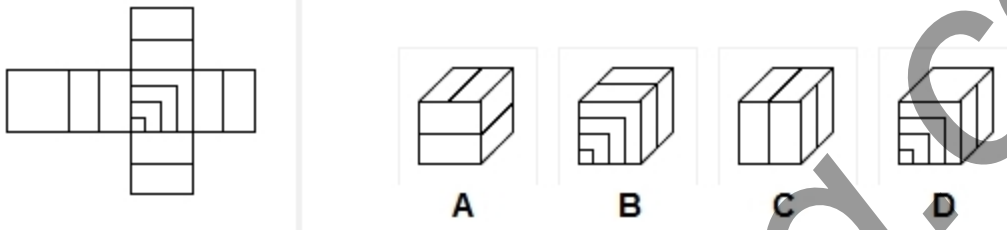


Option A – The main diagram consists of three blank facets (2, 3, 4) and three facets with shapes in them (1, 5, 6). The front and top facets in option A represent facets 5 and 6 respectively. Since the design is facing up in both facets this means that the facet on the right should be represented by facet number 1 but it isn't – it's blank. This option is incorrect.

Option B – The front, top and right facet represent facets 2, 6 and 5 respectively. This is the correct answer.

Option C – The front facet should be represented by facet number 2 rather than number 1 due to the location of the designs on the top and right facets. This option is incorrect.

Option D - The top facet should be represented by facet number 2 rather than number 1 due to the location of the designs on the front and right facets. This option is incorrect.

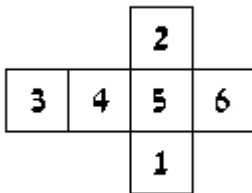


Question 11

Which of the cubes shown could be made from the pattern?

Correct answer: B

Explanation



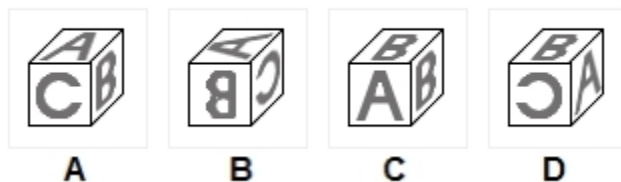
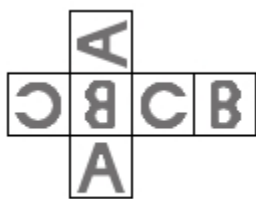
The main diagram consists of 4 facets with a line cutting across, a blank facet and a facet with a number of lines across. Due to the location of the four facets with the line cutting across (facets 1, 2, 4, 6), these facets can only be situated in such a way that encircles the cube.

Option A – On all three facets there are lines cutting across the middle which is impossible (see explanation above). This option is incorrect.

Option B – The front, top and right facet represent facets 5, 2 and 6 respectively. This is the correct answer.

Option C - On all three facets there are lines cutting across the middle which is impossible (see explanation above). This option is incorrect.

Option D – The blank facet and the facet with the multiple lines sit in opposing facets in the main diagram (3 and 5 respectively) and therefore this option is incorrect



Question 12

Which of the cubes shown could be made from the pattern?

Correct answer: A

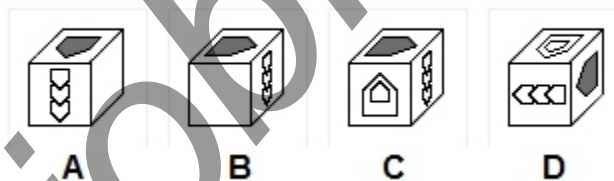
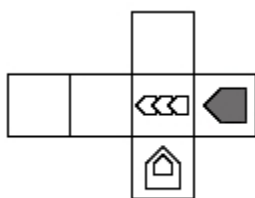
Explanation

Option A – The main diagram consists of the letters A, B, C – each appearing in two facets. The letters are situated in correct form in relation to each other. This option is correct.

Option B – The right facet should have a C on it situated in the opposite direction in relation to the top and front facets. This option is incorrect.

Option C – The two facets with the letter B on them are placed in opposing facets therefore there is no situation in which these two facets could be placed next to each other as shown in option C. This option is incorrect.

Option D – The front facet has a C on it and the right facet has an A on it. The way in which the two letters are situated next to each other is not feasible. This option is incorrect

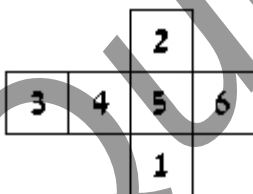


Question 13

Which of the cubes shown could be made from the pattern?

Correct answer: B

Explanation



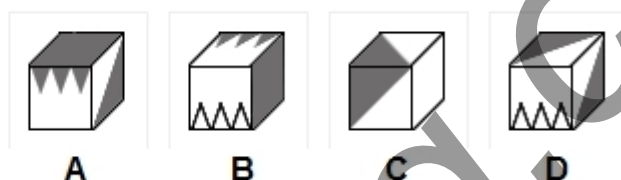
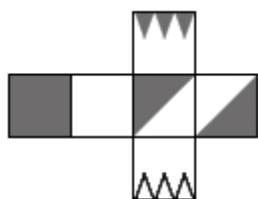
The main diagram consists of three blank facets and three facets each with a different pattern on it.

Option A – The top and front facet represent facets 6 and 5 respectively this mean that the right facet should not be blank but should be represented by facet number 1. This option is incorrect.

Option B – The top and right facet represent facets 6 and 5 respectively this mean that the facet at the front should be blank (facet number 2). This option is correct.

Option C – The top and right facet represent facets 6 and 5 respectively this mean that the facet at the front should be blank but it isn't. This option is incorrect.

Option D – The right and front facet represent facets 6 and 5 respectively this mean that the top facet should be blank but it isn't. This option is incorrect.



Question 14

Which of the cubes shown could be made from the pattern?

Correct answer: A

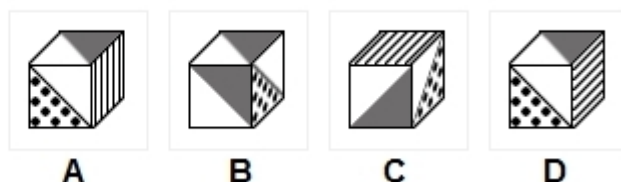
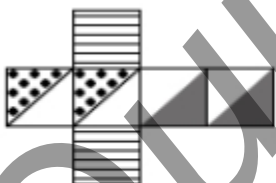
Explanation

Option A – When folding the cube using your imagination the gray facet and the facet with the gray triangles are situated in relation to each other as they appear in this option. This means the facet on the right should consist of a gray triangle which colours the lower right hand side of the facet – as it appears in this option. The answer is correct.

Option B – the facets with the small triangles (gray and white) are situated on opposing sides of the cube, therefore option B is incorrect.

Option C – the two facets with the gray triangle in them are not situated in relation to each other as they appear in option C. This option is incorrect.

Option D – the two facets with the gray triangle in them are not situated in relation to each other as they appear in option D. This option is incorrect



Question 15

Which of the cubes shown could be made from the pattern?

Correct answer: A

Explanation

Option A - If the facet on the front and the top facet represent the central element in the main diagram (the triangle with the black dots) and the 2nd element from the right (the gray shaded triangle) then the facet on the right should have vertical lines (representing the bottom facet in the main diagram). Option A is correct.

Option B - the facet on the right should have horizontal lines on it rather than a spotted triangle in relation to the two facets with the gray triangles. Option B is incorrect.

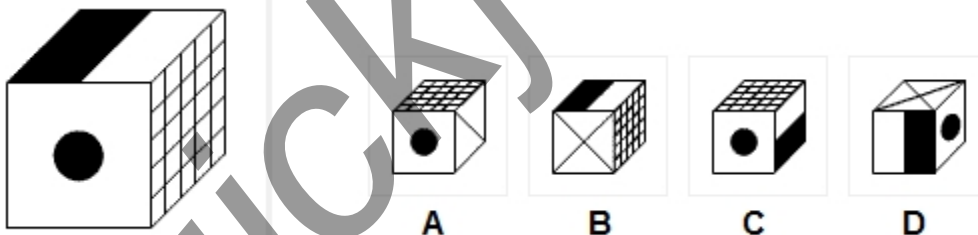
Option C - the spotted triangles and the gray triangles are located on opposite ends of the facets. Yet, in option C their location on their respective facets is similar. Therefore, this option is incorrect.

Option D - this option is very similar to option D, yet rather than vertical lines, the lines on the right facet are horizontal. Therefore this option is incorrect

TEST TWO:

Spatial Reasoning - Instructions

There are 15 questions in this test and you should answer as many as you can.



Question 1

Which of the four possible options represent the cube shown from a different perspective?

Correct answer: A

Explanation

Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option

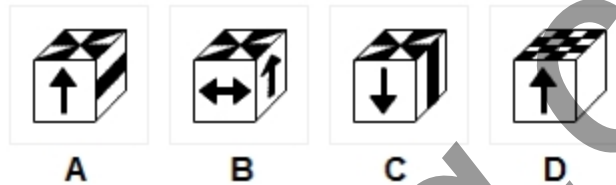
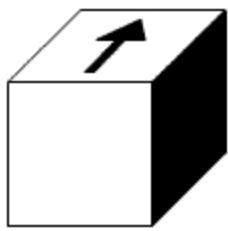
that maintains (or does not violate) that relationship.

Option A is the correct answer and it exposes the face at the bottom of the cube in the main diagram - a diagonal.

Option B is wrong because the cube hasn't rotated and the front face has changed into an X instead of a black circle.

Option C is wrong because if the cube is so rotated, the face that is half black and half white is supposed to appear on the left instead of on the right, in relation to the other two visible faces.

Option D is wrong because if the cube is so rotated, the circle should be on the top face, in relation to the half black/half white face.



Question 2

Which of the four possible options represent the cube shown from a different perspective?

Correct answer: B

Explanation

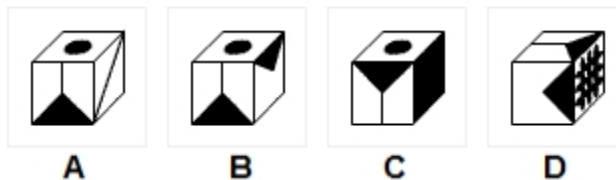
Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option that maintains (or does not violate) that relationship.

Option A is wrong because if the cube is so rotated, the black face should be on the right side of the cube.

Option B is correct, revealing two hidden sides: the back and left sides of the cube in the main diagram.

Option C is wrong because if the cube is so rotated, the white face should be on top of the cube.

Option D is wrong because if the cube is so rotated, the black face should be on the right side of the cube.



Question 3

Which of the four possible options represent the cube shown from a different perspective?

Correct answer: A

Explanation

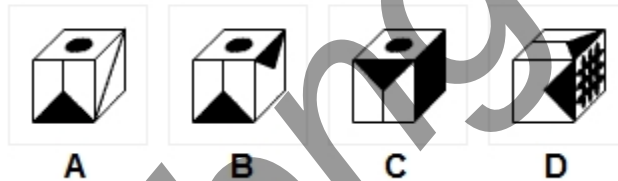
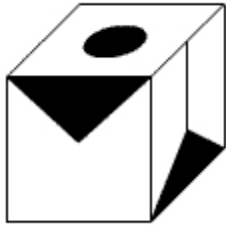
Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option that maintains (or does not violate) that relationship.

Option A is the correct answer which indicates a left rotation and reveals the face at the back of the cube.

Option B is wrong because if the triangle is on the right, the funnel should be at the back of the cube rather than in front in relation to it.

Option C is wrong because if the cube is so rotated, the circle should be on the bottom rather than on top of the cube in relation to the funnel face

Option D is wrong because the face with the triangle and the face with the funnel are misplaced in relation to each other.



Question 4

Which of the four possible options represent the cube shown from a different perspective?

Correct answer: C

Explanation

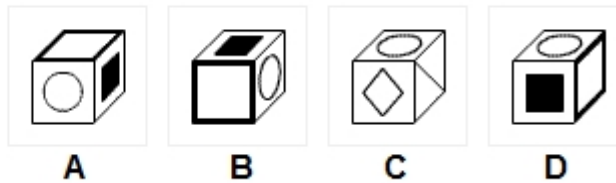
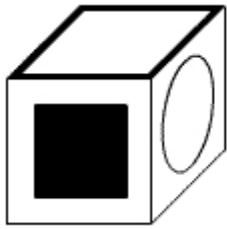
Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option that maintains (or does not violate) that relationship.

Option A is wrong because the cube cannot be rotated to have the black face on the right side of the face with the grid.

Option B is wrong since the cube is at the same position as in the main diagram and therefore the top face should have an X.

Option C is correct since it reveals the face which was hidden at the bottom in the main diagram.

Option D is wrong because if the cube is so rotated, the face on the right should have been black.



Question 5

Which of the four possible options represent the cube shown from a different perspective?

Correct answer: C

Explanation

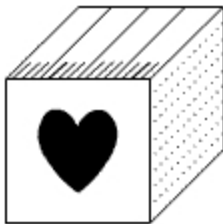
Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option that maintains (or does not violate) that relationship.

Option A is wrong because if the cube is so rotated, the circle should be on the back and not on the front face .

Option B is wrong because if so rotated, the black square should be at the bottom rather than on top.

Option C is correct because we now see two new designs that were hidden in the main diagram.

Option D is wrong because if the cube is so rotated, the blank face should be on the left side of the cube in relation to the black square and the white circle, rather than on the right



Question 6

Which of the four possible options represent the cube shown from a different perspective?

Correct answer: D

Explanation

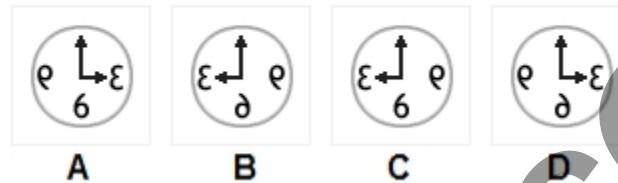
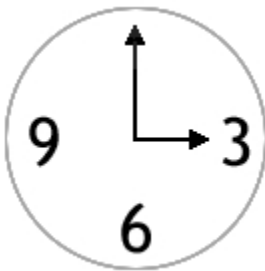
Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option that maintains (or does not violate) that relationship.

Option A and B are wrong because if we rotate the cube so that the heart is on the right, the top lines should be horizontal rather than vertical in relation to it.

Option C is wrong because the design on the top face has changed slightly in relation to the

heart.

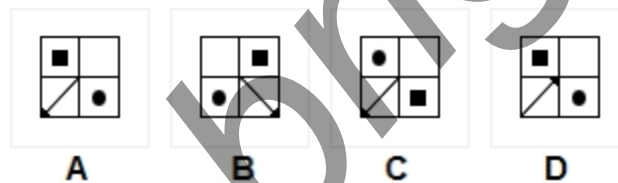
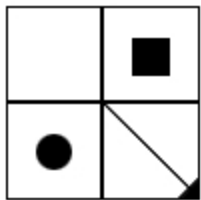
Option D is correct and it reveals the hidden face, a triangle, that is on the bottom in the main diagram.



Question 7

Choose the mirror image of the shape.

Correct answer: B



Question 8

Choose the mirror image of the shape.

Correct answer: A

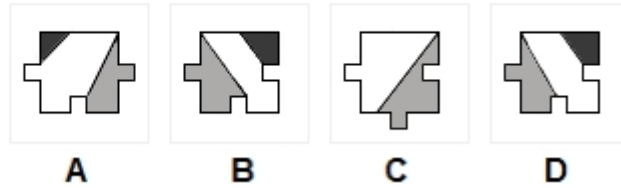
Explanation

Option A is correct. It has the arrow pointing to the opposite direction, the circle is in the opposite square and so is the upper rectangle.

Option B is identical to the test shape. Had this been a symmetrical shape, it could have been a correct choice.

Option C has the shape turned upside down instead to the sides.

Option D has the arrow turning outside of the shape, which is not the case for the test shape



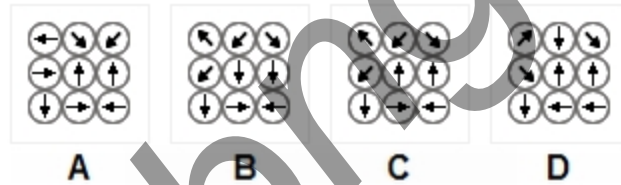
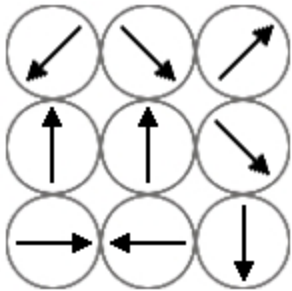
Question 9

Choose the mirror image of the shape.

Correct answer: D

Explanation

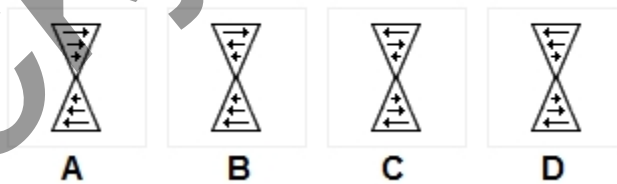
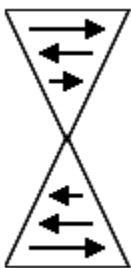
Option D is correct. This is the only shape in which proportions and colors have not changed and have only been turned to the opposite side



Question 10

Choose the mirror image of the shape.

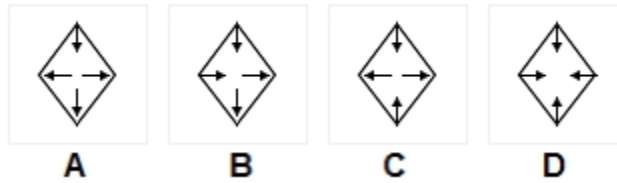
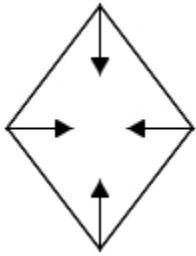
Correct answer: C



Question 11

Choose the mirror image of the shape.

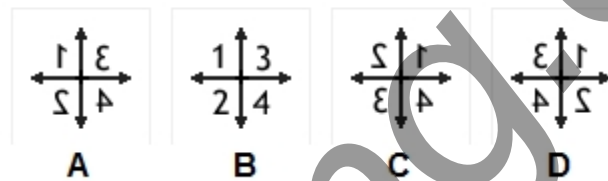
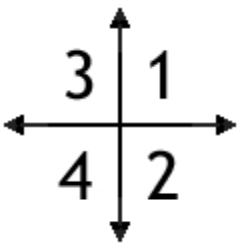
Correct answer: C



Question 12

Choose the mirror image of the shape.

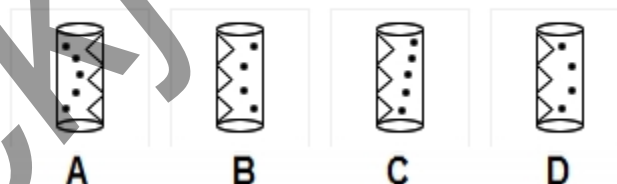
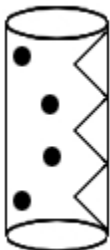
Correct answer: D



Question 13

Choose the mirror image of the shape.

Correct answer: A



Question 14

Choose the mirror image of the shape.

Correct answer: B



A



B



C



D

Question 15

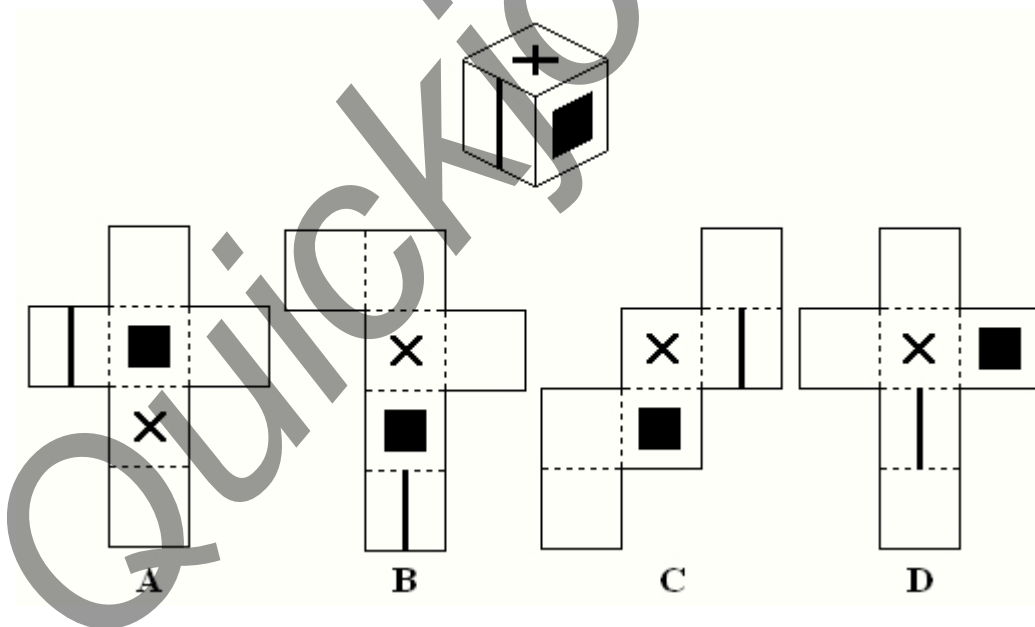
Choose the mirror image of the shape.

Correct answer: A

TEST THREE:

Spatial Reasoning - Instructions

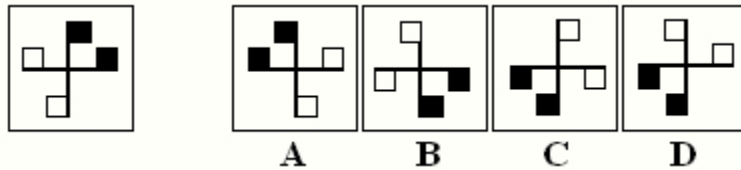
There are 15 questions in this test and you should answer as many as you can.



Question 1

Which pattern can be folded to make the cube shown?

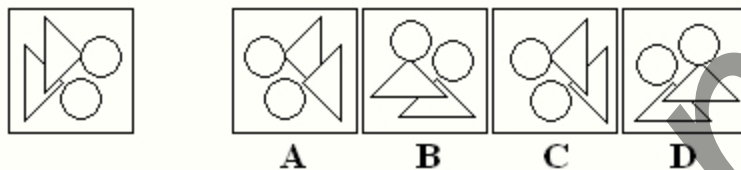
Correct answer: D



Question 2

In the figures shown, one of the shapes (A-D) is identical to the first figure but has been rotated. Which figure is identical to the first?

Correct answer: C



Question 3

In the figures shown, one of the shapes (A-D) is identical to the first figure but has been rotated. Which figure is identical to the first?

Correct answer: B

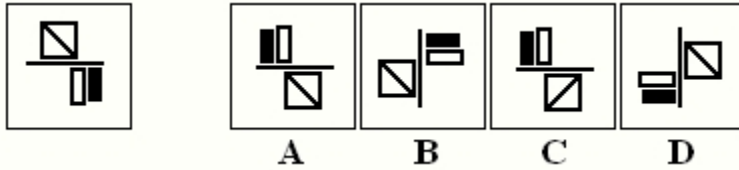


Question 4

In the figures shown, one of the shapes (A-D) is identical to the first figure but has been rotated. Which figure is identical to the first?

Your answer:

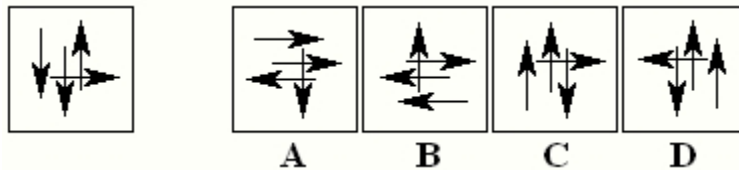
Correct answer: C



Question 5

In the figures shown, one of the shapes (A-D) is identical to the first figure but has been rotated. Which figure is identical to the first?

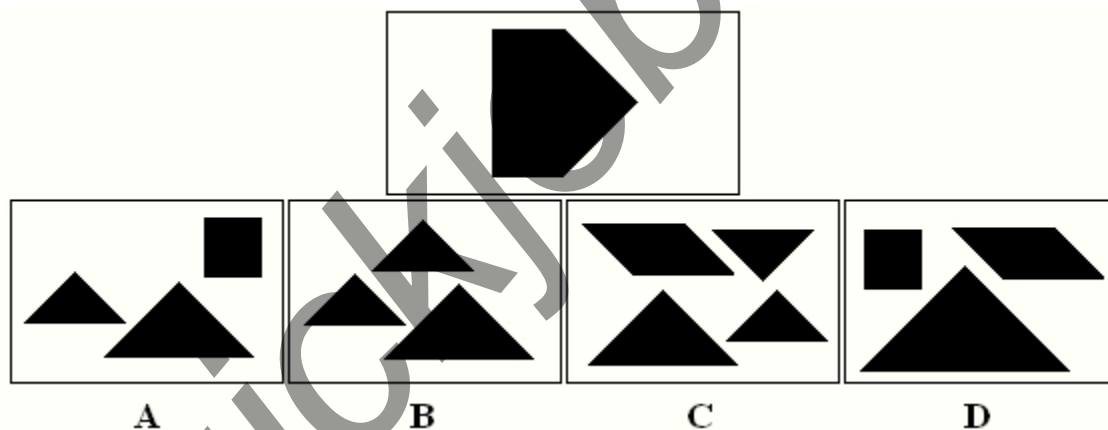
Correct answer: A



Question 6

In the figures shown, one of the shapes (A-D) is identical to the first figure but has been rotated. Which figure is identical to the first?

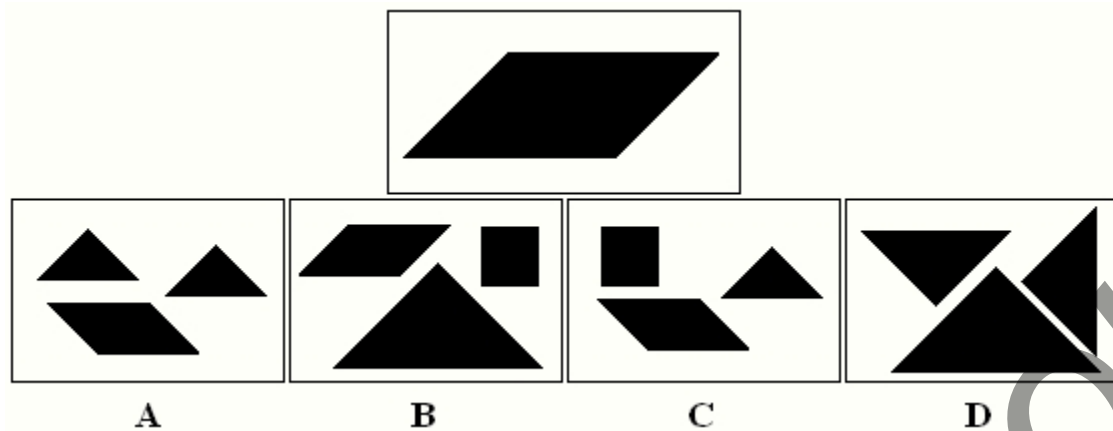
Correct answer: D



Question 7

Which group of shapes can be assembled to make the shape shown?

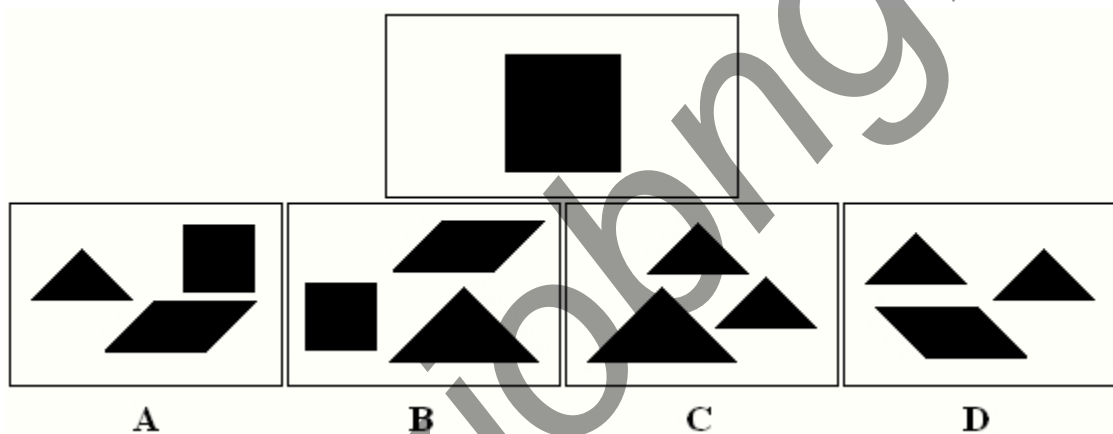
Correct answer: C



Question 8

Which group of shapes can be assembled to make the shape shown?

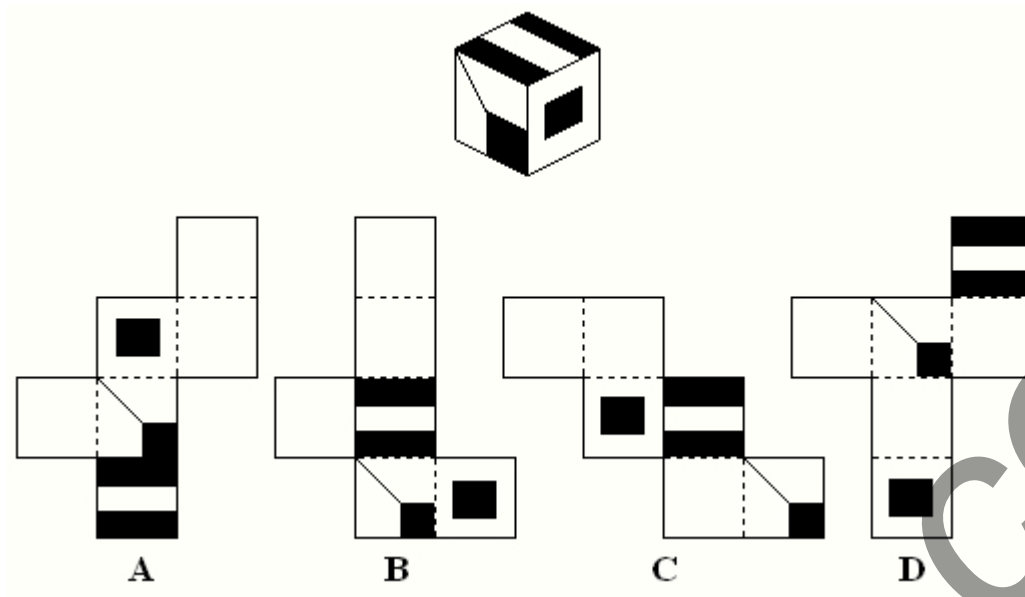
Correct answer: D



Question 9

Which group of shapes can be assembled to make the shape shown?

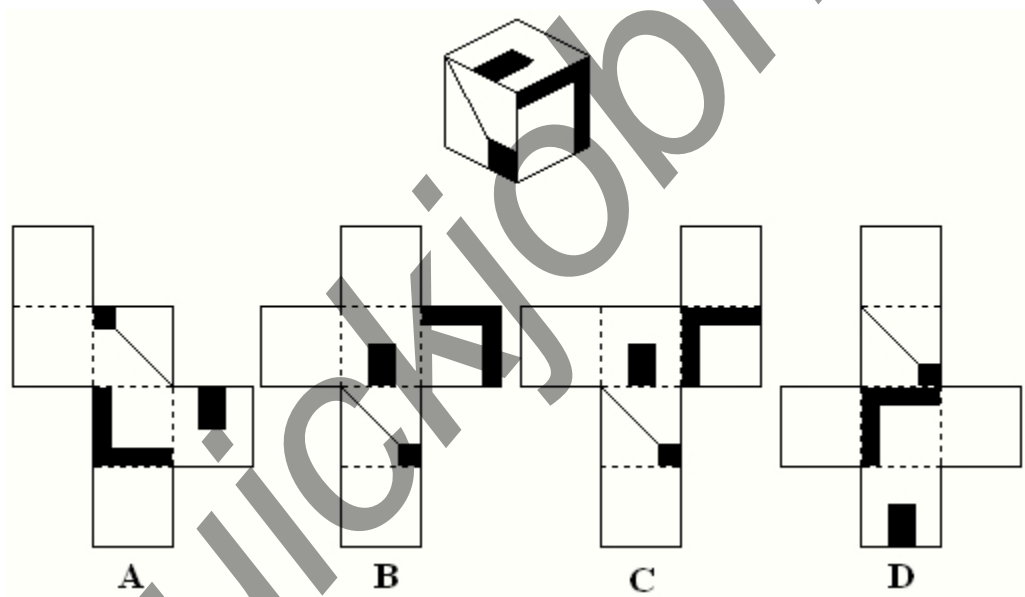
Correct answer: C



Question 10

Which pattern can be folded to make the cube shown?

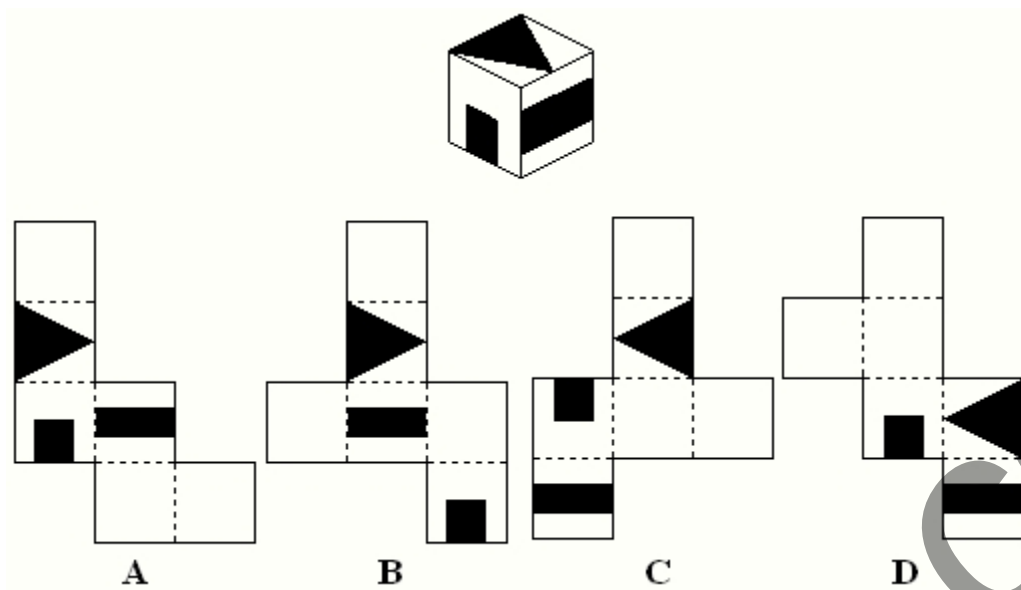
Correct answer: B



Question 11

Which pattern can be folded to make the cube shown?

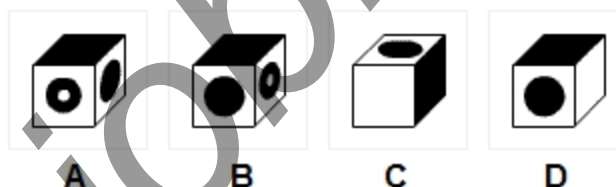
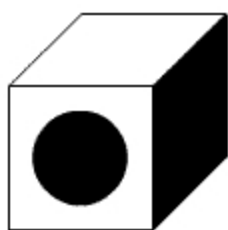
Correct answer: C



Question 12

Which pattern can be folded to make the cube shown?

Correct answer: A



Question 13

Which of the four possible options represent the cube shown from a different perspective?

Correct answer: B

Explanation

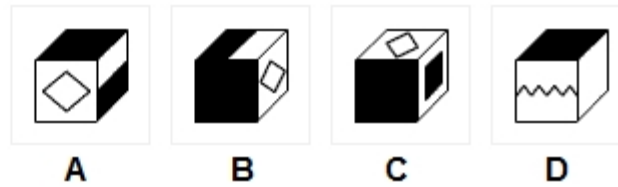
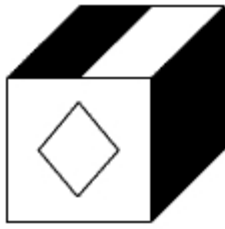
Remember that only three faces of a cube can be shown in an illustration. Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option that maintains (or does not violate) that relationship.

A is wrong because if the cube is so turned, the face facing the front should be white.

B is correct and reveals the bottom face of the cube that was hidden in the main diagram.

C is wrong because if the cube is so turned, the white face should be at the back of the cube rather than in front.

D is wrong because if the cube is so turned, the white face should be on the left side rather than on the right.



Question 14

Which of the four options represent the cube shown from a different perspective?

Correct answer: D

Explanation

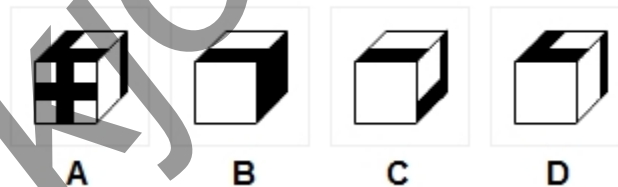
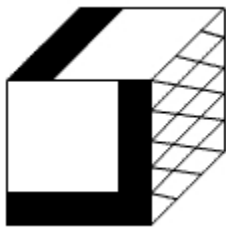
Remember that only three faces of a cube can be shown in an illustration. Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option that maintains (or does not violate) that relationship.

A is wrong because if the cube is so turned, the half black/half white face should be on the left in relation to the diamond, rather than on the right.

B is wrong because if the cube is so turned, the half black/half white face should be at the bottom of the cube.

C is wrong because if the cube is so turned, the face on the right should be half black/half white rather than being a black square.

D is correct, and it reveals two hidden faces



Question 15 (

Which of the four possible options represent the cube shown from a different perspective?

Correct answer: C

Explanation

Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that exists between the visible elements of the cube and find the option that maintains (or does not violate) that relationship.

Option *A* is wrong because if the cube is so turned, the face that has a black and white wallpaper pattern on it should be facing the front instead of the face with the black cross.

Option *B* is wrong because if the cube is so turned, the face on the right-hand side should depict a reverse L shape rather than a black face.

Option *C* is correct and reveals a blank face that was hidden in the main diagram.

Option *D* is wrong because if the cube is so turned, the face facing the front should be the black and white wallpaper pattern rather than a blank face.

END OF SPATIAL REASONING

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