

NNPC APTITUDE TEST

PAST QUESTIONS AND SOLUTIONS

Numerical Reasoning - (17 minutes)

TEST ONE:

Numerical Reasoning - Instructions

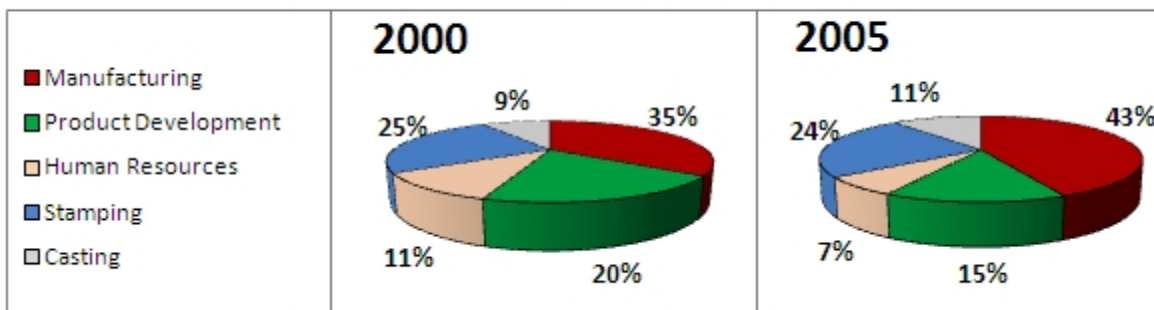
The numerical reasoning test measures your ability to interpret numerical information presented in tables, charts and graphs. You will be given numerical scenarios and asked several questions per scenario. For each question you are given four or five answer options.

Work out the correct answer to each question using only the numerical information provided.

You may use a calculator if you wish.

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

DORF - Motor Manufacturing Company Employee Distribution



Question 1

many employees did the manufacturing department have in 2005?

- A. 1257
- B. 5748
- C. 8458
- D. 10057
- E. Cannot say

Correct answer: E

Explanation

We have no information about the sample size therefore we cannot convert the percentages to numbers.

Question 2

In the year 2000 which two departments combined had exactly the same amount of employees as the Product Development department?

- A. Stamping and casting
- B. Human Resources and Manufacturing
- C. Stamping and Human Resources
- D. Human Resources and Product Development
- E. Human Resources and Casting

Correct answer: E

Explanation

In the year 2000, the Product Development department constituted 20% of the workforce. Human resources (11%) and Casting (9%) together have 20%. The answer is Human Resources & Casting

Question 3

In the year 2000, the Product Development department constituted of 400 employees. How many employees worked for the Stamping department in that year?

- A. 400
- B. 450
- C. 500
- D. 550
- E. 600

Correct answer: C

Explanation

Product Development constitutes 20% (one fifth) of the work force and has 400 employees. Stamping constitutes 25% of the workforce. Therefore, $(400 \times 25) / 20 = 500$ = the number of employees working in the Stamping department.

Question 4

Which two departments combined accounted for a larger share in the employee distribution in 2005 in comparison to 2000?

- A. Casting and Human Resources
- B. Product Development and Casting
- C. Human Resources and Manufacturing
- D. Product Development and Stamping
- E. Human Resources and Product Development

Correct answer: C

Explanation

You should workout which two departments combined are larger in 2005 than in 2000 from the listed options.

1st option Casting & Human Resources constituted 20% in 2000 and were only 18% in 2005.

2nd option Product Development & Casting constituted 29% in 2000 and were only 26% in 2005

3rd option Human resources & Manufacturing constituted 46% in 2000 and were 50% in 2005 therefore this is the correct option. No need to compute further.

Question 5

In 2005, the Product Development department consisted of 150 employees. This number was 25% lower than in 2000. How many employees worked in the Stamping department in 2000?

- A. 160
- B. 187
- C. 200
- D. 250
- E. None of these

Correct answer: D

Explanation

If the Product Development department had 150 employees in 2005 which was 75% of the number of employees working in the same department in 2000, then the number of employees working in the department in 2000 = $(150 \times 100) / 75 = 200$.

Therefore, in 2000, 200 employees of the Product Development department constituted 20% (a fifth) of the entire workforce. In 2000 the Stamping department constituted 25% (a quarter) of the workforce.

So, the number of Stamping department employees in 2000 were = $(200 \times 25) / 20 = 250$ employees

Train Transportation Patterns Over Time

Train Line	Route (KM)	Transporting Passengers (thousands)			
		Day Time		Night Time	
		1930	2005	1930	2005
AG	12	311	225	75	181
AC	15	279	265	123	245
CD	16	254	425	87	311
RF	18	201	487	54	317
DT	22	152	587	49	385
PE	25	111	601	52	405
PR	27	85	705	27	417
ZA	35	16	706	7	425

Question 6

How many people traveled less than 16 KM during the day time in 2005?

- A. 225,000
- B. 279,000
- C. 490,000
- D. 654,000
- E. 929,000

Correct answer: C

Explanation

Only AG & AC trains have routes that are less than 16 KM long.

During the daytime in 2005 there were (225,000 + 265,000) passengers traveling in both lines. That is 490,000.

Question 7

In which train line did more people travel in 1930 than 2005?

- A. DT line night time
- B. AC line night time
- C. PE line day time
- D. PR line night time
- E. AC line day time

Correct answer: E

Explanation

The AC line day time train in 2005 had only 265,000 passengers in comparison to 279,000 in

1930.

Note: The AG line day time train in 2005 only had 225,000 in comparison to 311,000 in 1930, however this option is not amongst the available answer options

Question 8

In 1930, how many people traveled less than 20 KM during the night time?

- A. 339,000
- B. 471,000
- C. 491,000
- D. 512,000
- E. 627,000

Correct answer: A

Explanation

RF, CD, AC, & AG train lines have routes that are shorter than 20KM. The sum of the respective passengers in the night time in 1930 = $54+87+123+75 = 339 \times 1000 = 339,000$ passengers.

Question 9

In which of the train lines was the difference between the number of day and night time passengers the smallest in 2005?

- A. PR line
- B. CD line
- C. AG line
- D. RF line
- E. AC line

Correct answer: E

Explanation

We must compare the differences between train line routes in the two 2005 columns (Day column and Night column)

PR line has a difference of $(705-417) = 288$

CD line has a difference of $(425-311) = 114$

AG line has a difference of $(225-181) = 44$

RF line has a difference of $(487-317) = 170$

AC line has a difference of $(265-245) = 20$

The smallest number difference between day and night time passengers in 2005 is in line AC

Question 10

By approximately how many percentages did the use of the daytime PE line increase between 1930 and 2005?

- A. 400%
- B. 450%
- C. 500%

D. 550%

E. 600%

Correct answer: B

Explanation

In 1930 the PE daytime line had 111,000 passengers. In 2005 it had 601,000 passengers.

The percent of passengers traveling in 2005 on the daytime PE line in comparison to 1930 = $(601,000 \times 100) / 111000 = 541.4\%$.

The increase in number of passengers is the difference between the two dates = $541.4\% - 100\% = 441.4\%$? 450%.

Silverbrick International Lager Breweries Ltd. 2005

Brewery	Operational Costs (Millions Euros)	Marketing & Development (Millions Euros)	Monthly Output (Thousands litres)	Total Output as % of 2004	Revenues (Millions Euros)
Uxbridge, UK	3.6	12	12000	120%	25
Malmö, Sweden	0.3	2.2	1200	90%	3
Torino, Italy	2.8	3.5	8000	70%	14
Ottawa, Canada	0.28	8	1000	80%	3
Canberra, Australia	0.3	7	4500	110%	8

1 litre is sold for 1.5 euros

Question 11

Which brewery produced the least in 2004?

A. Uxbridge,UK

B. Malmö,Sweden

C. Torino,Italy

D. Ottawa,Canada

E. Canberra,Australia

Correct answer: D

Explanation

In order to determine which brewery produced the least in 2004, we need to use the 2005 monthly output and the total output as a percentage for 2004.

Monthly output for 2004 = $(\text{monthly output 2005} \times 100\%) / \text{total output as a percentage for 2004}$.

Monthly output for 2004 x 12 = yearly output for 2004
Ottawa, Canada : $(1000 \times 100) / 80 = 1250\text{K}$ per month in 2004

$1250 \times 12 = 15000\text{K}$ litres in 2004

TIP: In this question, Ottawa, Canada's low output stands out. Therefore, you can make an educated guess by looking at the data without having to do the actual calculation.

Question 12

If production for the brewery in Ottawa, Canada were expected to increase by 40% in 2006, by how many thousands of litres would its monthly output differ in 2006 compared with the output in 2004?

- A. 140 more
- B. 150 more
- C. 160 more
- D. 200 more
- E. Cannot Say

Correct answer: B

Explanation

We need to determine how many litres the Canadian brewery is expected to produce monthly in 2006 = (monthly output for 2005 x expected increase in %) / 100% = monthly output for 2006
 $(1000 \times 140) / 100 = 1400\text{K}$ litres per month in 2006

We need to calculate how many litres the Canadian brewery produced monthly in 2004 =
(monthly output 2005 x 100) / total output as a percentage for 2004

$(1000 \times 100\%) / 80\% = 1250\text{K}$ per month in 2004

Monthly output for 2006 ? monthly output for 2004 = $1400\text{K} - 1250\text{K} = 150\text{K}$ litres more beer was produced per month in 2006 compared with 2004.

Question 13

If the Monthly Output for the Torino brewery represented approximately 60% of the total output (with the remainder being water), how many thousands of litres of water were produced every month?

- A. 1333
- B. 8000
- C. 533
- D. 5333
- E. 5666

Correct answer: D

Explanation

We first have to determine how many thousands of litres of beer and water were produced. We know the amount of beer produced (8000 litres), which represents 60% of the total output.

(Monthly output Torino beer x 100) / 60 = monthly output of beer and water = $(8000 \times 100) / 60 = 13333$ litres

Subtract the amount of beer produced from the total amount of water and beer produced to determine the amount of water produced.

Monthly output of water and beer ? monthly output of beer = monthly output of water = 13333 ?
8000 = 5333 litres of water

Question 14

Which of these breweries has the highest ratio of operational costs to revenues?

- A. Uxbridge, UK
- B. Malmö, Sweden
- C. Torino, Italy
- D. Ottawa, Canada
- E. Canberra, Australia

Correct answer: C

Explanation

The ratio is calculated in the following manner:

operational costs / revenues = ratio

Torino, Italy = $2.8 / 14 = 0.2$ is the highest ratio

Question 15

If a 25% increase in marketing and development costs will lead to a 35% increase in revenues, what will the ratio of marketing and development costs to revenues be in Canberra, Australia following the rise?

- A. 0.081:1
- B. 0.085:1
- C. 0.81:1
- D. 1:1.23
- E. Cannot Say

Correct answer: A

Explanation

Calculate the 25% increase in marketing and development costs:

marketing and development costs $\times 1.25 = 7 \times 1.25 = 8.75$

Calculate the 35% increase in revenues: revenues $\times 1.35 = 8 \times 1.35 = 10.8$

Calculate the new ratio for marketing and development costs to revenues = $8.75 / 10.8 = 0.81$

London - Sydney Daily Flights

To Heathrow	To Gatwick	From Heathrow	From Gatwick
4:45	04:00	06:00	10:00
9:15	09:30	12:00	12:30
13:45	15:00	Until	15:00
Until	Until	24:00	Until
22:45	20:30		22:30
Schedule in GMT. Sydney is GMT + 10			
Flight time 26 hours			

Question 16

How many flights are there from Sydney to London daily?

- A. 4
- B. 5
- C. 7
- D. 9
- E. 11

Correct answer: D

Explanation

Flights from Sydney arrive to Heathrow at 04:45, 09:15, 13:45 and every 4.5 hours until 22:45. Therefore, there is an additional flight at 18:15, and overall there are five daily flights.

Flights from Sydney arrive to Gatwick at 04:00, 09:30, 15:00 and 20:30 (every 5.5 hours and there is no additional flight). Therefore there are four daily flights.

The total number of flights from Sydney to London is 9

Question 17

What is the first available flight to Sydney from London after 5:00 pm?

- A. 17:15
- B. 17:30
- C. 17:45
- D. 18:00
- E. 18:30

Correct answer: B

Explanation

Flights to Sydney leave from Heathrow at 06:00, 12:00 and every 6 hours until 24:00. Therefore, there is an additional flight at 18:00.

Flights to Sydney from Gatwick leave at 10:00, 12:30, 15:00 and at intervals of 2.30 hours until 22:30. Therefore, the first flight after 15:00 is at 17:30.

The first available flight after 17:00 is the 17:30 (5:30 pm) flight from Gatwick

Question 18

What time will it be in Sydney, Australia when the first morning flight arrives from London?

- A. 6 pm
- B. 6 pm + 1 day
- C. 8 pm + 1 day
- D. 12 pm
- E. Cannot Say

Correct answer: B

Explanation

The first flight to leave London in the morning is the 6:00am from Heathrow. The flight duration is 26 hours, which means the flight arrives at 8:00am GMT the following day. Since Sydney time is GMT + 10, local time will be 6 pm + 1 day.

Question 19

How many flights are due to arrive in London between 15:00-17:30 GMT?

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

Correct answer: B

Explanation

Flight duration is 26 hours. The schedule shown is in GMT, therefore the 13:45 to Heathrow is due to arrive at 15:45 the following day and the 15:00 to Gatwick is due to arrive at 17:00 the following day. There are a total of 2 flights.

Question 20

Which flight would you have to catch from London in order to reach Sydney on the same day?

- A. 4:00 from Gatwick
- B. 4:45 from Heathrow
- C. 9:15 from Heathrow
- D. 9:30 from Gatwick
- E. No Flight

Correct answer: E

Explanation

Since the flight duration is more than 24 hours, there is no possibility of reaching Australia the same day

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 (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 $(7,704 \div 89) = 8,656$

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)

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':

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

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

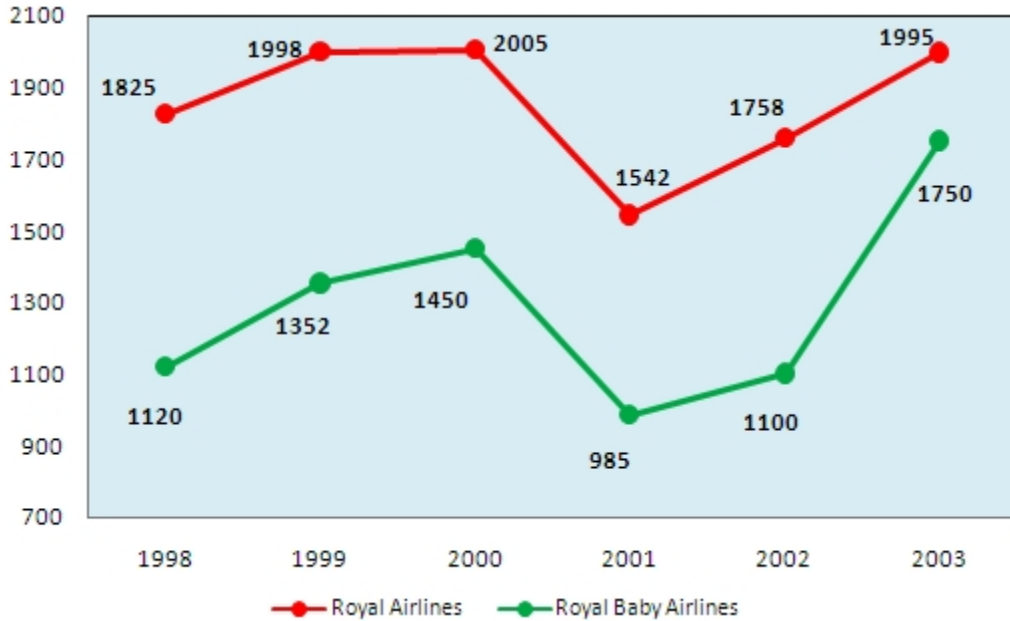
Correct answer: C

Explanation

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

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

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

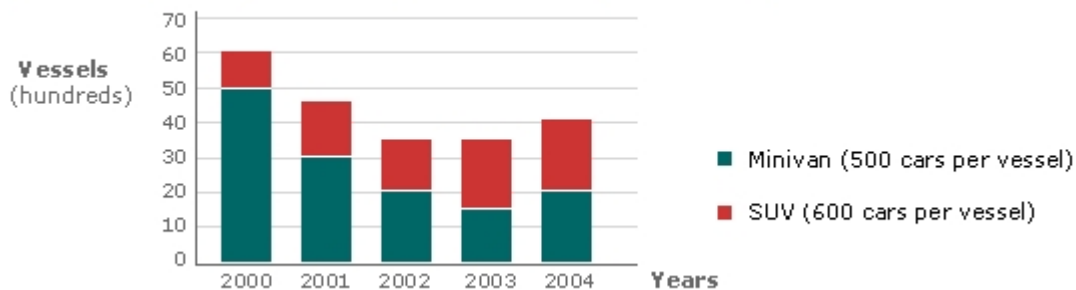
Explanation

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 = $600 \times 2000 = 1,200,000$ 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

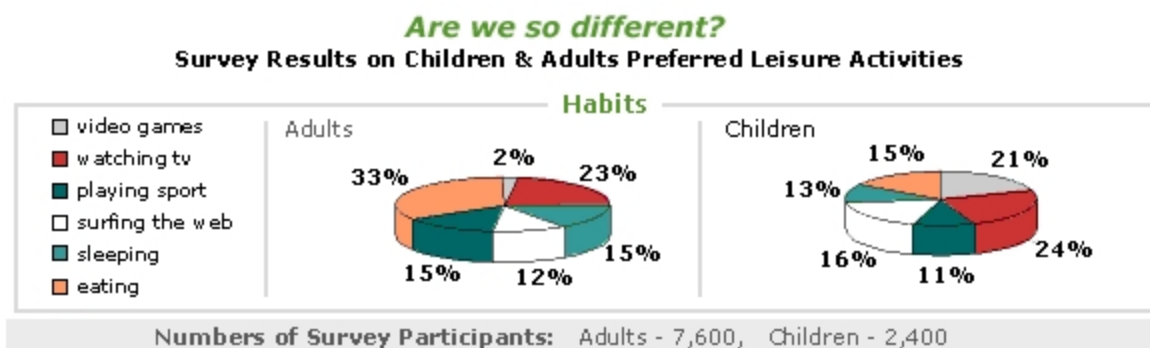
Explanation

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)



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

TEST THREE:

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

Food Preference Survey (percentages)

The column 'Males & Females' refers to the percent of males and females preferring a certain type of food.

	Gender		
	Male	Female	Males & Females
Steak	25	8	18
Salad	6	25	13
Ice cream	15	16	15
Chocolate	12	19	16
Hamburger	18	4	12
Soup	8	10	9
Pasta	10	11	10
Cheese	6	7	7

Question 1

If 12,000 people participated in this survey, how many of them liked soup?

- A. 960
- B. 1080
- C. 1200
- D. 1360
- E. 1420

Correct answer: B

Explanation

9% of the survey respondents (male and female) liked soup.
Out of 12,000 people this is $(12,000 \times .09) = 1080$ people.

Question 2

Which type of food do males and females prefer most distinctively?

- A. Salad
- B. Hamburger
- C. Steak
- D. Cheese
- E. Chocolate

Correct answer: A

Explanation

Calculate the differences between genders for the categories that stand out.
Salad is 19% (25-6), steak is 17% (25-8) and hamburger is 14% (18-4).
The correct answer is therefore salad at 19%.

Question 3

What percentage of survey participants indicated food other than soup and cheese as their favourite?

- A. 83%
- B. 84%
- C. 86%
- D. 87%
- E. Cannot Say

Correct answer: B

Explanation

9% of males and females preferred soup and 7% preferred cheese = 16% of participants indicated that cheese and soup are their favourite foods.
100% of survey participants minus 16% who preferred soup and cheese = 84% that preferred other foods.

Question 4

Of the options below, which food item do men most commonly eat?

- A. Chocolate
- B. Hamburger
- C. Ice cream
- D. Steak
- E. Cannot Say

Correct answer: E

Explanation

The information is about food preference, not about frequency of consumption (e.g., we know that males prefer steaks but we don't know how often they actually eat them). The correct answer is cannot say

Question 5

If the sample consists of 12,000 males and females, and we can assume that the number of females who prefer pasta is 649, then how many males participated in the survey?

- A. 2400
- B. 1200
- C. 5900
- D. 6100
- E. Cannot Say

Correct answer: D

Explanation

The number of females who prefer pasta is 649, making up 11% of females (according to the data). This means that the number of females participating in the sample = $(100 \times 649) / 11 = 5900$ females. Therefore, $12000 - 5900 = 6100$ males participated in the survey

Currency Exchange Rates

	Brazilian Real	Canadian Dollar	Euro	British Pound	Japanese Yen	Swiss Franc	U.S. Dollar
USD (\$)	2.28	1.14	0.83	0.56	118.5	1.29	-----
Euro (€)	2.74	1.37	----- -	0.6	142.4	1.55	1.20
Yen(¥)	0.019	0.009	0.007	0.005	-----	0.011	0.008

Question 6

Estimate the value of 1000 Euro to a British Pound.

- A. 6
- B. 60
- C. 600
- D. 66
- E. 660

Correct answer: C

Explanation

One Euro is worth 0.6 British Pound. Therefore, 1000 Euros x 0.6 = 600 British Pounds .

Question 7

Using the USD exchange rate as the convertible currency, seven Swiss Francs are worth how many Brazilian Real?

- A. 5.43 Real
- B. 1.29 Real
- C. 15.96 Real
- D. 12.38 Real
- E. None of the above

Correct answer: D

Explanation

One USD is worth 1.29 Swiss Francs, therefore 7 Swiss Francs are worth 5.43 USD (7/1.29).
One USD is worth 2.28 Real. Therefore, 5.43 USD (which are worth 7 Swiss Francs) = 5.43 USD x 2.28 Real = 12.38 Real

Question 8

How many Brazilian Real can you buy for 5000 Canadian Dollars, using the USD exchange rate?

- A. 11400
- B. 1500
- C. 10000
- D. 5000
- E. 2500

Correct answer: C

Explanation

5000 (Canadian Dollars) / 1.14 (USD: CAD exchange rate) = 4386 USD.
4386 (USD) x 2.28 (USD: BRL exchange rate) = 10000 Brazilian Real

Question 9

What is the value of 500 British pounds in Brazilian Real, using the Yen exchange rate?

- A. 1900
- B. 19000

- C. 100000
- D. 1000000
- E. None of the above

Correct answer: A

Explanation

500 (British pounds) / 0.005 (JPY: GBP exchange rate) = 100,000 Yen
 100,000 (Yen) x 0.019 (JPY: BRL exchange rate) = 1900 Brazilian Real

Question 10

A rumour about an upcoming recession in Japan has reduced the value of the Yen 7% compared with the Euro. How many Euros can you now buy for 500 Yen?

- A. 3.5
- B. 3.26
- C. 3.15
- D. 3.76
- E. None of the above

Correct answer: B

Explanation

500 Japanese Yen before the reduction were worth = 500 x 0.007 = 3.5 Euro (the 0.007 figure is taken from the data).

"Is your good health related to your job?"
Percentage of reported sick days in sectors

	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Sep-Oct	Nov-Dec
Construction	15.2	14.9	12.5	16.2	12.2	13.5
IT	8.5	8.2	7.6	8.6	7.5	8.6
Civil Service	16.2	15.5	14.8	18.0	18.5	17.1
Financial	6.5	7.2	5.8	4.5	6.2	5.4
Healthcare	11.2	12.5	14.8	13.5	12.5	14.2

Question 11

In which time of the year are people most likely to be sick in the Financial services sector?

- A. Jan-Feb
- B. Mar-Apr
- C. May-Jun
- D. Jul-Aug
- E. Sep-Oct

Correct answer: B

Explanation

The highest number of reported sick days in the Financial services sector stands at 7.2% in Mar-Apr.

Question 12

For every 1000 people working in the IT sector, how many typically report sick days in the September-October period?

- A. 25
- B. 250
- C. 75
- D. 750
- E. 7.5

Correct answer: C

Explanation

The percentage of reported sick days for the IT sector during the Sep-Oct period stands at 7.5%. This means that for every 1000 employees in the IT sector, 75 report in sick.

Question 13

For every 600 people working in the Financial services sector, how many typically report sick days in the July-August period?

- A. 27
- B. 45
- C. 2.7
- D. 4.5
- E. 5.5

Correct answer: A

Explanation

The percentage of reported sick days for the Financial services sector during the Jul-Aug period stands at 4.5%. This means that for every 600 employees in the Financial services sector, 27 report in sick ($600 \times (4.5/100) = 27$)

Question 14

If four times as many people are employed in the Financial services sector as in the Civil Service in which time of the year are the number of reported sick days likely to be equal?

- A. Mar-Apr
- B. May-Jun
- C. Jul-Aug
- D. Sep-Oct
- E. Nov-Dec

Correct answer: C

Explanation

If the number of employees in the Financial services sector is four times as big as the number of employees in the Civil Service, this means that the percentage of employees reporting in sick in the Civil Service has to be four times as big in comparison to the Financial Services sector for the number of employees reporting in sick in both sectors to be equal.

During the months of July-August 4.5% of employees in the Financial services sector report in sick and 4 times that percentage report in sick in the Civil Service (18%), hence the total number of reported sick days will be equal for both sectors.

The answer is Jul-Aug

Question 15

Which sector loses the largest number of workdays due to reported sick days?

- A. Construction
- B. Civil Service
- C. IT
- D. Financial
- E. Healthcare

Correct answer: B

Explanation

When observing the columns in the table it is clear that the Civil Service consistently has the highest percentage of reported sick days and therefore we can conclude without having to sum up the figures that in the Civil Service the highest number of sick days are reported.

Fashion Industry Sales

Annual Turnover	Local Designer	Chain Stores
Under £25,000	215	185
£25,000 - £35,000	356	195
£35,001 - £45,000	256	205
£45,001 - £55,000	178	542
£55,001 - £75,000	85	648
£75,001 - £100,000	65	1,021
£100,001 - £250,000	48	2,584
£250,001-£1,000,000	8	458
£1,000,001 and more	3	89
Total	1214	5927

Question 17

How many Local Designers have a turnover of less than £35,001?

- A. 256
- B. 356
- C. 571
- D. 215
- E. 827

Correct answer: C

Explanation

There are two categories that have a turnover of £35,001 or less : '£25,000-£35,000' and 'Under £25,000'.

The number of Local Designer shops that have such a turnover should be summed for both categories.

Local Designers that have a turnover of £35,001 or less = $215 + 356 = 571$

Question 18

How many Chain Stores have a turnover between £45,001 and £75,000?

- A. 263
- B. 1190
- C. 1453
- D. 542
- E. 648

Correct answer: B

Explanation

We need to sum the two categories of Chain Stores that fall within the range of £45,001 and £75,000 : '£45,001 - £55,000' and '£55,001 - £75,000'.

Chain Stores that have a turnover between £45,001 and £75,000 = $542 + 648 = 1190$

Question 19

In which turnover category do the largest numbers of Chain Stores fall?

- A. £100,001-£250,000
- B. £35,001 -£45,000
- C. £75,001 -£100,000
- D. £250,001-£1,000,000
- E. Cannot Say

Correct answer: A

Explanation

The chain stores column shows that the largest number of stores falls within the '£100,001-£250,000' category - 2584 stores.

Question 20

What is the approximate ratio of Local Designers to Chain Stores?

- A. 5:1
- B. 1:5
- C. 1:6
- D. 6:1
- E. Cannot say

Correct answer: B

Explanation

The total number of Local Designers is 1214 and the total number of Chain Stores is 5927.
 $5927 / 1214 = 4.88 \approx 5$. The approximate ratio of Local Designers to Chain Stores is 1 : 5

END OF NUMERICAL REASONING

NNPC 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

Anxieties about air and water pollution, desertification and resource depletion are nothing new. It is increasingly accepted that the human impact on the environment is intensifying, compounded by population growth, the increasing pace of economic life and the spread of pollutants far beyond their places of origin. New scientific evidence- about global climate change, changes to ozone in the upper atmosphere and the reduction of biodiversity-contributes to the growing concern. In addition highly publicised environmental disasters have led the public to conclude that the very license to operate conferred on stakeholders in business might be infringed by the environmental impact of corporate activities.

Question 1

Restricting pollutants to their place of origin makes no difference to the impact of human activity on the environment.

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

Correct answer: B

Question 2 The depletion of the ozone layer can cause skin cancer

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

Correct answer: C

Explanation

Cannot say

Question 3

Anxieties about air and water pollution, desertification and resource depletion is increasing

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

Correct answer: C

Explanation

Cannot say

Passage

There have been three major influenza pandemics over the last century. The first and most severe was the Spanish flu of 1918 that infected half of the world's population and from which around 50 million people died. The next was the 1957 Asian flu which also infected nearly half of the world's population, but the number of fatalities was lower: about half of a million in total. The third was the Hong Kong flu of 1968-69 which was the cause of between 1 and 3 million deaths. To put these figures into perspective, the more recent but more widely reported outbreaks have been comparatively small. It must also be remembered that between ? and ? million people worldwide die of seasonal influenza every year. Better communication worldwide in the last few decades means that new strains of flu become worldwide news very rapidly, but it also means that governments can quickly put into effect measures to help prevent the spread of the disease.

Question 4

The world's population in 1918 was less than 80 million.

- A. True
 - B. False
 - C. Cannot say
- Correct answer: B**

Explanation

False

Question 5

The Hong Kong flu pandemic of 1968-1969 had the second highest death toll from flu in the last century.

- A. True
 - B. False
 - C. Cannot say
- Correct answer: A**

Explanation

True

Question 6

Major flu pandemics occur at least three times a century.

- A. True
 - B. False
 - C. Cannot say
- Correct answer: C**

Explanation

Cannot say

Question 7

Modern communication helps to prevent the spread of flu pandemics.

- A. True
 - B. False
 - C. Cannot say
- Correct answer: A**

Explanation

True

Passage

With increasing costs of fuel and environmental concerns, hybrid cars are the way of the future. Hybrids provide both improved fuel economy and reduced emissions. Hybrid cars use a petrol engine and an electrical energy storage device, usually a battery of nickel-metal hydride cells. When a large amount of

energy is required, the two works together; when a lesser amount of energy is required (at lower speeds around town), the stored electrical energy powers an electric motor. You won't notice much difference from a conventional car when you drive a hybrid, except that there will be very little noise at low speeds. What you will notice, however, is the improved fuel economy and dashboard displays that inform you about the energy flow and fuel consumption. Most hybrid cars have shown reduced greenhouse gas emissions of around 25% compared with a petrol car of a similar type, and use 15% to 30% less fuel. The purchase price of a hybrid is around 10% more than a similar-sized petrol-driven car

Question 8

The only source of propulsion in a hybrid car is an electric motor.

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

Correct answer: B

Explanation

False

Question 9

Hybrid cars use less fuel and are more economical than conventional petrol-driven cars.

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

Correct answer: C

Explanation

Cannot say

Question 10

The nickel-metal hydride cells add around 10% onto the cost of a hybrid car compared with a similar conventionally-powered car.

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

Correct answer: C

Explanation

Cannot say

Passage

Cyberbullying is a relatively new phenomenon. It occurs mainly among young people, especially teenagers, and has replaced traditional forms of physical and verbal bullying, presumably because it can provide some anonymity and is seen to be "at a distance". The main types of cyberbullying are by direct

contact through e-mails, instant messages or the use of mobile phones for texting or sending photographs or videos. However, increasingly we are seeing the use of social networking sites where bullies make fun of victims or even get hold of their messaging accounts and chat to people pretending to be the victim. Cyberbullying can be more harmful than traditional forms of bullying since it happens at home (where victims should feel safe) and can involve many bullies at once. In the world of modern communication, cyberbullying is difficult for the victims to escape from.

Question 11

You are more likely to be a victim of cyberbullying if you are an adult.

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

Correct answer: B

Explanation

False

Question 12

Social networking sites can be used by cyberbullies by stealing the identity of their victim and

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

Correct answer: A

Explanation

True

Question 13 (id: 1153)

The solution to reduce cyberbullying is for parents to restrict their children's use of the internet and their mobile phones.

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

Correct answer: C

Explanation

Cannot say

Passage

Seventy years ago a girl discovered a strange skeleton in a tunnel in Mexico. All that remains of the skeleton today is the skull. In 1999 the skull was given to Lloyd Pye, an American author and researcher into an alternative theory of the origin of human life. Since that time Pye has been trying to prove that the skull, named "Starchild", is that of an alien. The skull is much less heavy than a human skull, has an

unusual shape and unusually placed eye sockets. It also has strange fibres running through the bone. Various tests have been done on the skull, showing that its bone has a different chemical composition from human bone. A DNA test has shown that the mother of "Starchild" was human, but the father's genetic heritage could not be recovered. Pye has concluded that "Starchild" is a hybrid of a human mother and an alien father. Some scientists are more skeptical and believe that "Starchild" was a malformed human.

Question 14

The skull of 'Starchild' is much heavier than a normal human skull.

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

Correct answer: B

Explanation

False

Question 15

DNA tests have not disproved the theory that 'Starchild' was a hybrid of a human mother and an alien father.

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

Correct answer: A

Explanation

True

Question 16

Some scientists believe that Pye is a fraud and that he has used the unusual skull to try to further his theory of an alternative origin of human life.

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

Correct answer: C

Explanation

Cannot say

Passage

Bluetooth is a modern wireless technology named after an ancient Viking King, King Blatand (which is Danish for King Bluetooth) who united the warring tribes of Denmark and Norway in the 10th Century. Bluetooth was given this name because it unites together many devices such as your computer, your

personal digital assistant, your mobile phone and your digital camera. The advantage of Bluetooth is that it does away with the need for cables and communicates instead by radio. All that's needed is for each device to have a Bluetooth chip. To communicate between the Bluetooth-enabled devices, all you need to do is put them within ten metres of each other. The real advantage of Bluetooth is that it allows you to easily synchronise data stored on your various devices. However, there are some issues with security using Bluetooth, despite each device having an individual ID number and PIN. To reduce this risk and to prevent eavesdropping, the radio frequency is continually changed.

Question 17

The Viking King, King Blatand, invented the Bluetooth technology.

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

Correct answer: B

Explanation

False

Question 18

Bluetooth provides a secure way to communicate between your various devices, such as your computer, your personal digital assistant, your mobile phone and your digital camera.

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

Correct answer: B

Explanation

False

Question 19

Bluetooth avoids the 2.45 GHz radio frequency band for security reasons.

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

Correct answer: C

Explanation

Cannot say

Question 20

Bluetooth-enabled devices can communicate with each other if they are five metres apart.

- A. True
 - B. False
 - C. Cannot say
- Correct answer:** A

Explanation

True

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.*

***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

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

The escalating crisis of antibiotic resistance and the uncertain outlook for new antibiotics have engendered renewed interest in bacterial predators as a method to eradicate drug-resistant pathogens. Bacterial predators, viruses that infect and rapidly destroy bacteria, were discovered almost a century ago and there have been many attempts to apply them to treat bacterial infections. While this type of treatment has been successfully used in parts of Eastern Europe, it has been largely ignored in the west. One problem is that while their ability to attack bacteria has been known since their discovery, knowledge about their interactions with mammalian cells is very restricted.

Question 1

Antibiotic drugs are used solely in the treatment of bacteria.

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

Correct answer: C

Explanation

Cannot say

Question 2

Over the last century bacterial predators have provided the most advances in terms of alternatives in the treatment of bacterial infections.

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

Correct answer: C

Question 3

Eastern European countries use bacterial predators to eradicate drug-resistant pathogens because the effect they have on mammalian cells is quite well known to them.

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

Correct answer: B

Explanation

False

Question 4

There were no disputes about the advantages and disadvantages of using bacterial predators as treatments prior to the last 100 years

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

Correct answer: C

Explanation

Cannot say

Passage

The company expects the new factory, its first in Asia, to begin production early next year, and aims to built 18,000 tractors during its first year of operation. Full capacity will be achieved five years later, by which time annual output will be about 40,000 tractors, making it the company's largest producer worldwide. The move to open such a large production site stemmed from the availability of labour within the region, low production costs, positive inducements by the government to encourage foreign investment, good communication and transport links, and increasing demand for tractors locally.

Question 5

The company is already producing tractors in Asia.

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

Correct answer: B

Explanation

False

Question 6

Transport links were a consideration in deciding where to locate the new factory.

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

Correct answer: A

Explanation

True

Passage

In 1970, as a result of concern about the frequency with which criminals were committing crime across country borders and the fact that the local police officers were ill equipped to deal effectively with them, Regional crime units were established. Over the years regional crime units grew in sophistication to match the criminals they were mandated to target but rather than reactively investigating crimes, they proactively target those responsible for serious criminal offenses regionally, nationally and internationally. From these beginnings, on 1 may 1999 the National Crime Unit was established through the amalgamation of the six Regional Crime Units, inheriting their staff, premises, equipment and workload.

Question 7

Regional Crime Units fought crime both responsively and proactively on an international level.

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

Correct answer: A

Explanation

True

Question 8

Local police officers dealt effectively with all crime committed across police force borders before 1970.

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

Correct answer: B

Explanation

False

Question 9

There were no Regional Crime Units after the year 1998.

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

Correct answer: B

Explanation

False

Question 10

The National Crime Unit was founded in 1998 as a product of the highly sophisticated and successful organisation into which the Regional Crime Units had evolved.

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

Correct answer: B

Explanation

False

Passage

A large junkyard contains seemingly endless amounts of rusted metal and heaps of useless items that at one time were part of something. People visit junkyards looking for a replacement part or something that might just work for a project, yet most of what they see remains where it is. There are parts of the internet that are beginning to resemble a junkyard, cluttered with old sites, the majority of which lost their value long ago. The information available is often outdated and stale. There are businesses that allow their sites to deteriorate into junk and they are missing a great opportunity to gain a competitive advantage.

Question 11

Most of the Internet is becoming a junkyard.

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

Correct answer: C

Explanation

Cannot say

Question 12

Despite the fact that items from a junkyard can and will be re-cycled, a lot of it will never be used again.

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

Correct answer: A

Explanation

True

Question 13

Websites will always lose their value if they are not properly maintained.

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

Correct answer: C

Explanation

Cannot say

Question 14

Having a website that has deteriorated over time can help a company to avoid losing its competitive edge.

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

Correct answer: B

Explanation

False

Passage

The concept that an individual can study and specialise in the field of hypnosis is a consequence of our shifting views. As with many other professions of today, hypnosis began with the label of "Laypersons" before graduating to the recognised professionals they are now. As the profession continues to develop it will eventually establish itself alongside the traditionally conventional professions. Physicians, psychologists, counselors, social workers and nurses and many others now learn hypnosis. The success of this approach stems from these individuals having an open mind and a sincere desire to help others when more conservative or traditional interventions have failed or have only been partially successful.

Question 15

The fact that those who practise hypnotism have an open mind has been a key-part of the success of the approach.

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

Correct answer: A

Explanation

True

Question 16

The professional recognition of the field of hypnotism has been aided by the rising popularity of traditional approaches.

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

Correct answer: B

Explanation

False

Question 17

In line with the development of the profession, there has been a change in definition of those who practise in the field of hypnotism.

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

Correct answer: A

Explanation

True

Question 18

Success in the field of psychology or social work derives from the sincere desire to help other people.

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

Correct answer: C

Explanation

Cannot say

Experiential education is an extremely powerful approach for learning although with this power comes the need to implement a suitable appraisal process. This is specifically because the experiences can be so powerful that there is a need to find out what impact they are having. It is crucial to assist and assess the learning which is stimulated by this approach or risk triggering knowledge that may be counter-productive. The review will capture significant insight into what participants experience and the progress of each individuals learning and development, thereby also highlighting that value is placed on what participants have to say.

Question 19

The absence of a suitable process for reviewing knowledge acquired during experiential education may bring about learning that is in fact detrimental.

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

Correct answer: A

Question 20

Those who have undertaken experiential education will feel more valued if a follow-up evaluation is conducted.

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

Correct answer: C

END OF VERBAL REASONING

NNPC APTITUDE TEST

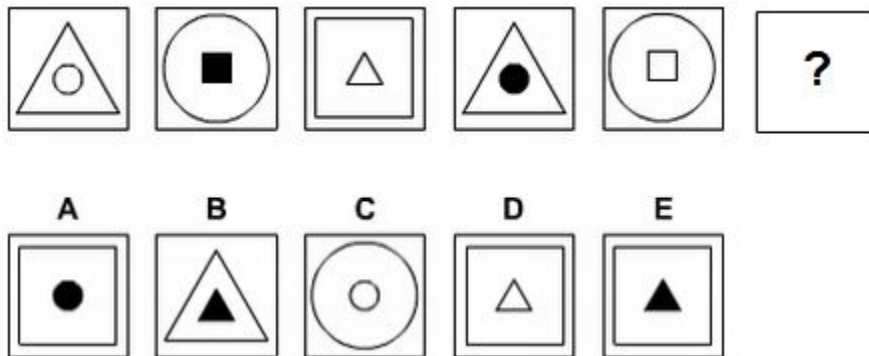
PAST QUESTIONS AND SOLUTIONS

Abstract Reasoning(16 mins for 16 qtns)

TEST ONE:

Abstract Reasoning - Instructions

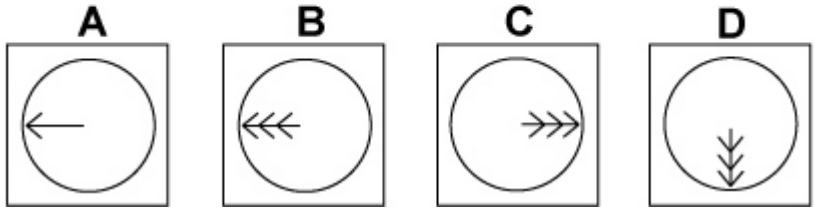
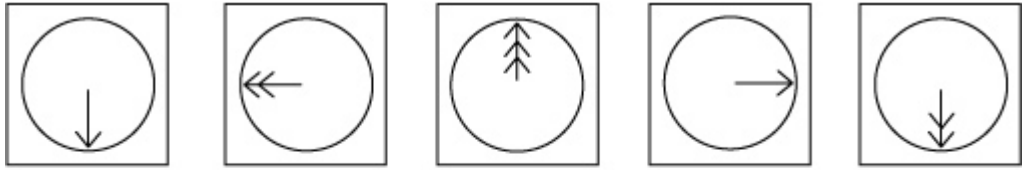
In this section you will have to answer questions that require you to follow the logic underlying a set of figures. In each question, you will need to determine which of the possible answers best matches the next figure in the sequence, or replaces a missing figure in the sequence.



Question 1

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

Correct answer: E



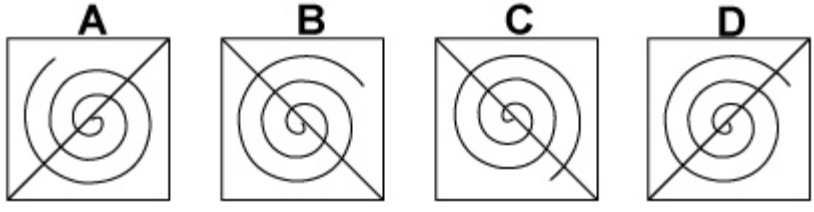
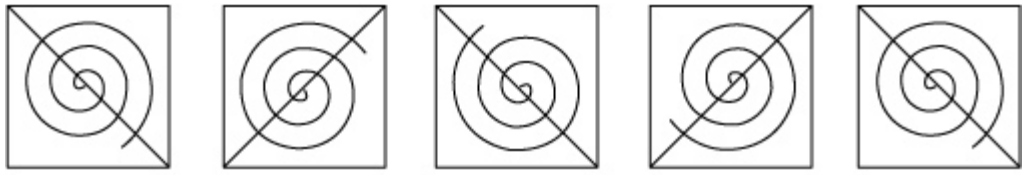
Question 2

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

Correct answer: B

Explanation

In this question, there are two rules to follow. The first rule is that the arrow rotates by 90° clockwise each time. Following this rule, the next diagram of the sequence should have the arrow pointing towards 9 o'clock. Therefore, the correct answer could be A or B. The other rule is that the number of arrowheads changes from 1 to 2 to 3, then back to 1 again etc. Following this rule, the number of arrowheads in the next diagram should be three. Therefore, the correct answer is B.



Question 3 (id: 11269)

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

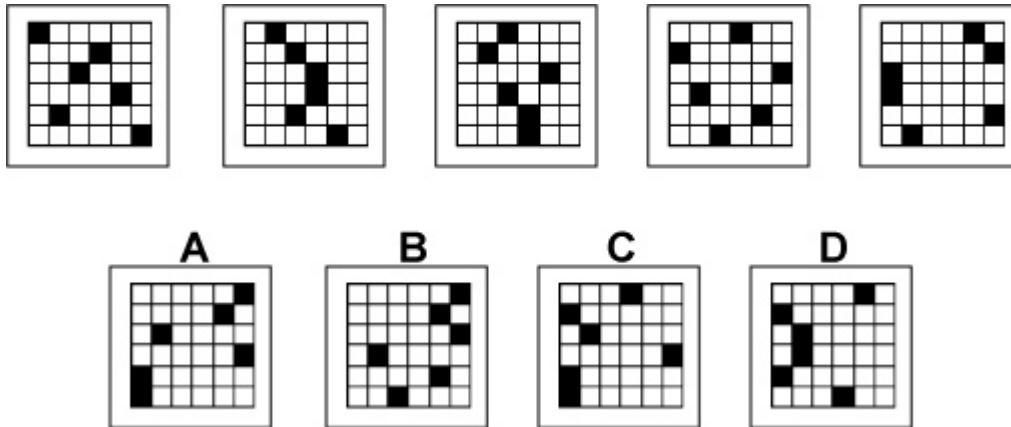
Correct answer: D

Explanation

In this question, there are two rules to follow.

The first rule is that the spiral rotates by 90° anticlockwise each time. Following this rule, the next diagram of the sequence should have the tail of the spiral at about 2 o'clock. Therefore, the correct answer could be B or D.

The other rule is that the diagonal alternates from top left - bottom right to top right-bottom left. Following this rule, the diagonal in the next diagram should be top right-bottom left. Therefore, the correct answer is D



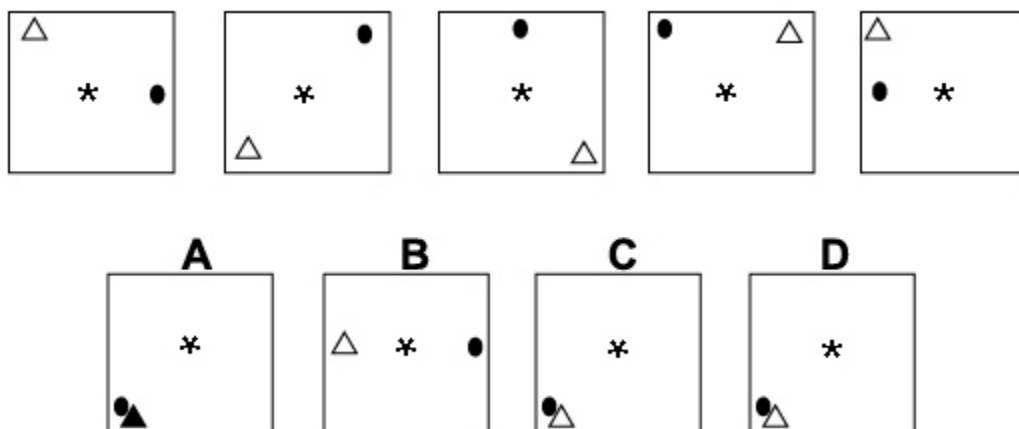
Question 4

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

Correct answer: A

Explanation

In this question, there is one black square in each row of the grid. The black squares in the first, third and fifth rows move one place to the right each time; and when they reach the right edge of the grid, they move to the first column of the left edge. The black squares in the second, fourth and sixth rows move one place to the left each time; and when they reach the left edge of the grid, they move to the first column of the right edge. Therefore, the correct answer is A.



Question 5

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

Correct answer: C

Explanation

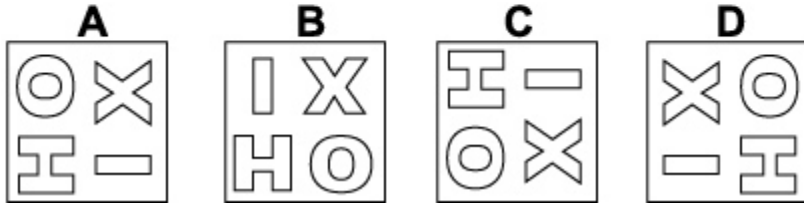
In this question, there are three rules to follow.

The first rule is that the asterisk flips vertically each time. Following this rule, in the next diagram of the sequence, the asterisk will be upside down. Therefore, the correct answer could be A, B or C.

The second rule concerns the white triangle which rotates each time through 90° anticlockwise around the outside of the square. Following this rule, in the next diagram of the sequence, the white triangle should be in the bottom left corner of the square. Therefore, the correct answer could be C or D

The third rule concerns the black dot which rotates each time through 45° anticlockwise around the outside of the square. Following this rule, in the next diagram of the sequence, the black dot should be in the bottom left corner of the square. Therefore, the correct answer could be A, C or D

Taking all the rules into consideration, the only possible answer is C



Question 6

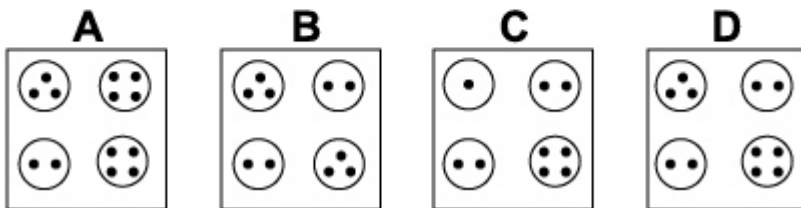
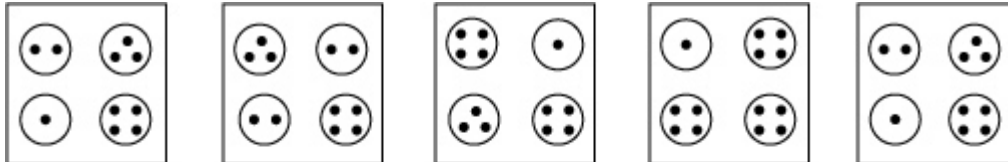
Which of the options is the next shape in the sequence?

Correct answer: B

Explanation

In this question, there is a sequence of transformations: 'reflection in the vertical axis', 'rotation of 90° clockwise', 'reflection in the horizontal axis', 'rotation of 90° clockwise', 'reflection in the vertical axis' etc.

Following this sequence, the next transformation should be 'reflection in the vertical axis', which means the next diagram in the sequence will be B.



Question 7

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

Correct answer: D

Explanation

In this question, the number of dots in each of the four circles follows a rule:

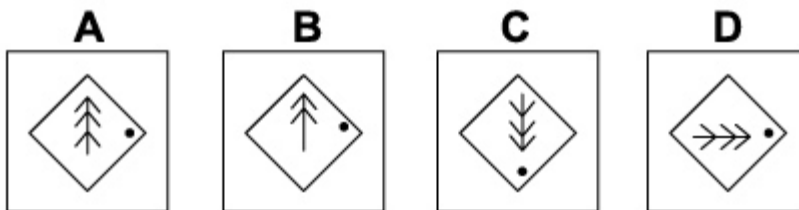
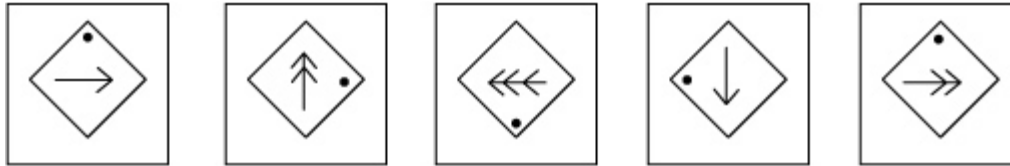
For the circle in the top left corner, the number of dots increases by 1 each time, with 4 becoming 1.

For the circle in the top right corner, the number of dots decreases by 1 each time, with 1 becoming 4.

For the circle in the bottom left corner, the number of dots increases by 1 each time, with 4 becoming 1.

For the circle in the bottom right, the number of dots is always 4.

Following these rules, for the next diagram in the sequence there should be 3 dots in the top left circle, 2 dots in the top right circle, 2 dots in the bottom left circle and 4 dots in the bottom right circle. Therefore, the correct answer is D.



Question 8

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

Correct answer: A

Explanation

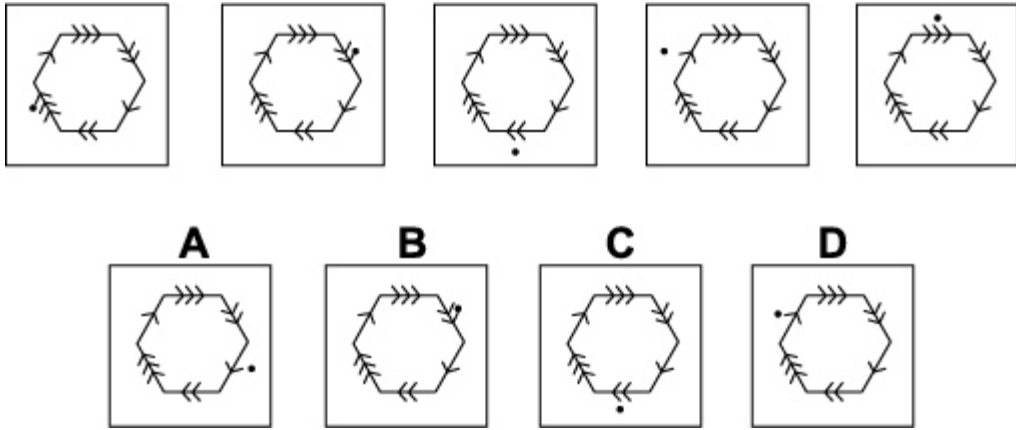
In this question, there are three rules to follow.

The first rule is that the dot moves through 90° clockwise each time. Following this rule, in the next diagram of the sequence, the dot should be at 3 o'clock. Therefore, the correct answer could be A, B or D.

The second rule is that the line with arrows rotates through 90° anticlockwise each time.

Following this rule, in the next diagram of the sequence, the arrowheads should point to 12 o'clock. Therefore, the correct answer could be A or B.

The third rule is that the number of arrowheads increases by 1 each time, with three arrowheads becoming 1. Following this rule, in the next diagram of the sequence, there should be three arrowheads. Therefore, the correct answer is A



Question 9

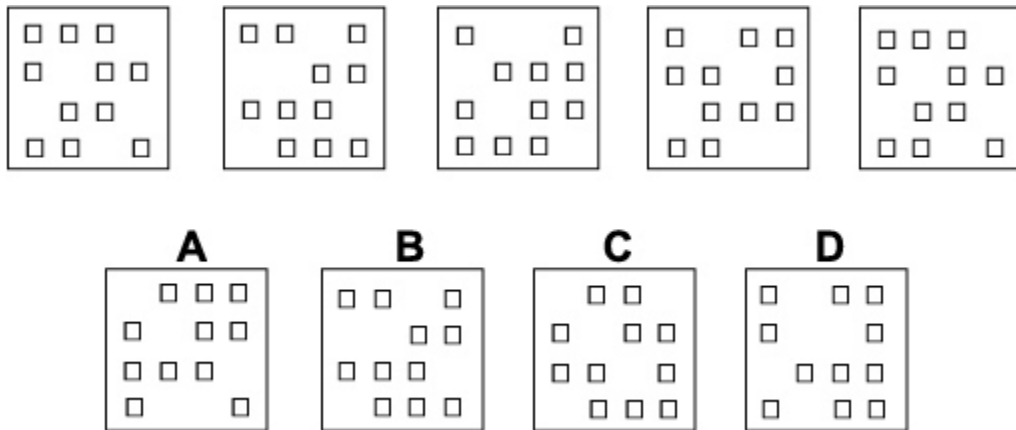
Which of the options is the next shape in the sequence?

Correct answer: C

Explanation

In this question, there is a hexagon with arrowheads on each of its sides. There is also a dot. The dot rotates clockwise around the perimeter of the hexagon according to the number of arrowheads it is adjacent to.

Following this rule, to find the next diagram of the sequence, the dot will have to rotate three places around the perimeter of the hexagon. Therefore, the correct answer is C.



Question 10

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

Correct answer: B

Explanation

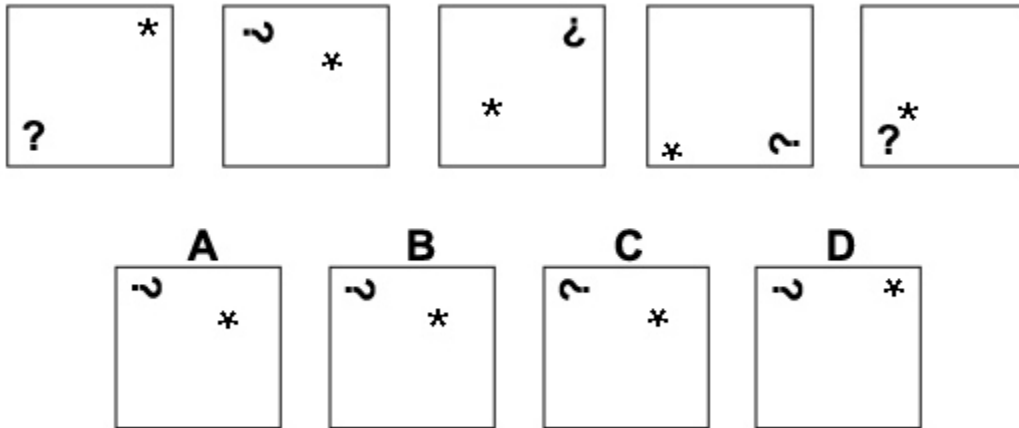
In this question, there is a grid of squares. There are two rules that must be followed, one after

the other.

The first rule is: the columns of the grid are moved one place to the right with the fourth column moving to the first column.

The second rule is: the rows of the grid are moved one place up with the top row moving to the bottom row.

Following these rules, to get the next diagram in the sequence will be B.



Question 11

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

Correct answer: A

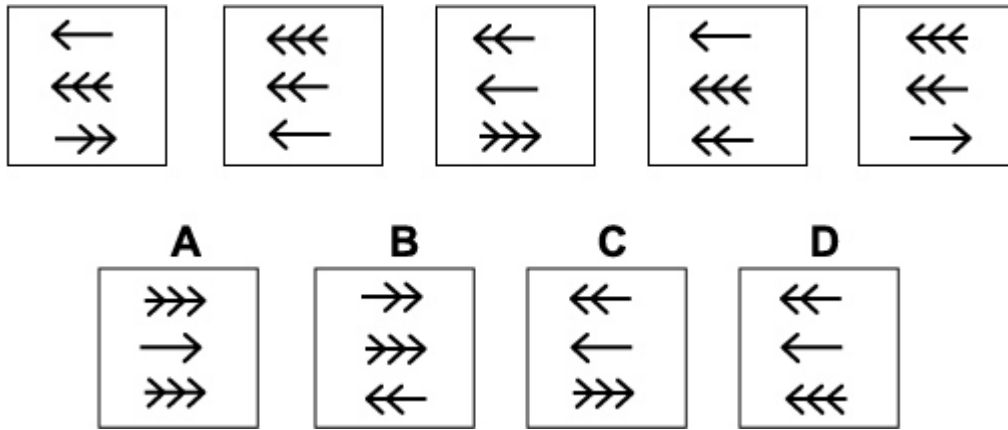
Explanation

In this question there are two rules.

The first rule concerns the question mark which rotates by 90° clockwise around the perimeter of the square each time, while also rotating itself by 90° clockwise. Following this rule, the next diagram of the sequence could be A, B or D.

The second rule concerns the asterisk which moves along a diagonal of the square to four equally spaced positions on the diagonal and at the same time flips vertically each time. Following this rule, in the next diagram of the sequence, the asterisk should be upside down and one place from the top right corner of the diagonal.

The correct answer, therefore, is A.



Question 12

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

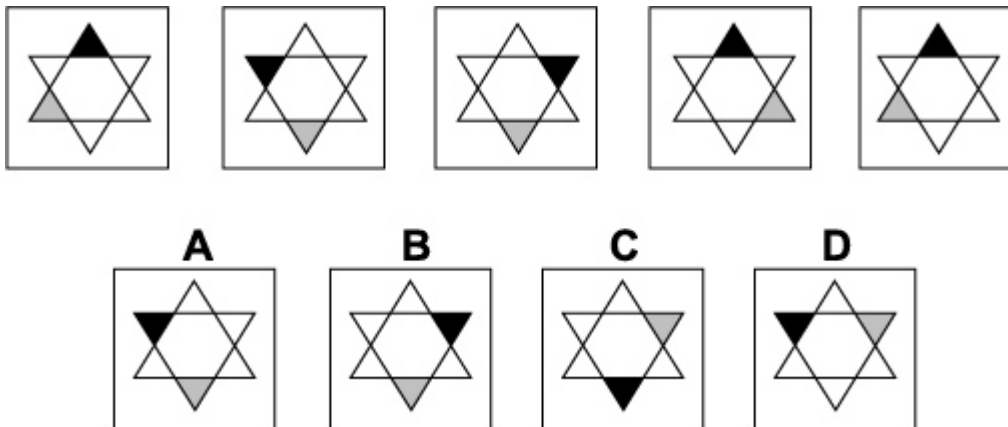
Correct answer: D

Explanation

In this question there are two rules to follow.

The first rule is that an arrow with three arrowheads is changed to an arrow with two arrowheads, an arrow with two arrowheads is changed to an arrow with one arrowhead and an arrow with one arrowhead is changed to an arrow with three arrowheads. Following this rule, the next diagram in the sequence could be C or D.

The second rule is that the arrow in the bottom position changes direction. Following this rule, the arrow with one arrowhead pointing towards the right at the bottom of the fifth diagram becomes an arrow with three arrowheads pointing towards the left in the next diagram. The correct answer, therefore, is D.



Question 13

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

Correct answer: A

Explanation

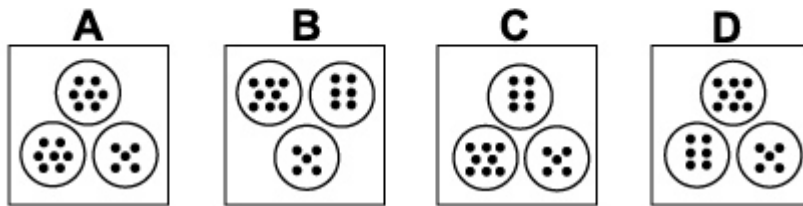
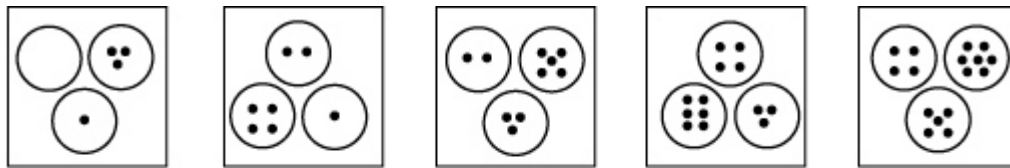
In this question there are two rules that are applied one after the other.

The first rule is that the six-pointed star rotates by 60° anticlockwise. This rule is applied first.

The second rule is that the star is reflected in the vertical axis.

Following these rules, to obtain the next diagram in the sequence, the star should be rotated by 60° anticlockwise.

The correct answer, therefore, is A.



Question 14

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

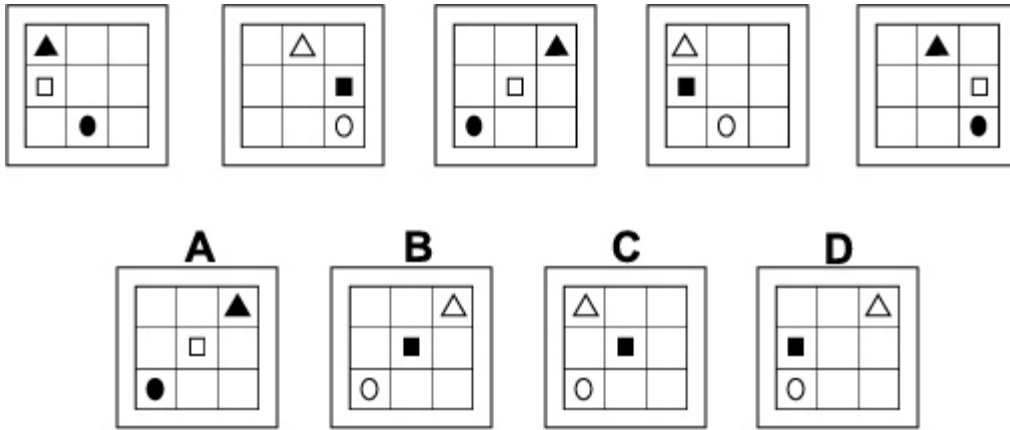
Correct answer: C

Explanation

In this question, there are two rules to follow.

The first rule is that the number of dots in the three circles increases by 1 each time. Following this rule, in the next diagram of the sequence the three circles should contain five, six and eight dots respectively. The correct answer, therefore, could be B, C or D.

The second rule is that the three circles rotate by 120° clockwise each time. Following this rule, the correct answer must be C.



Question 15

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

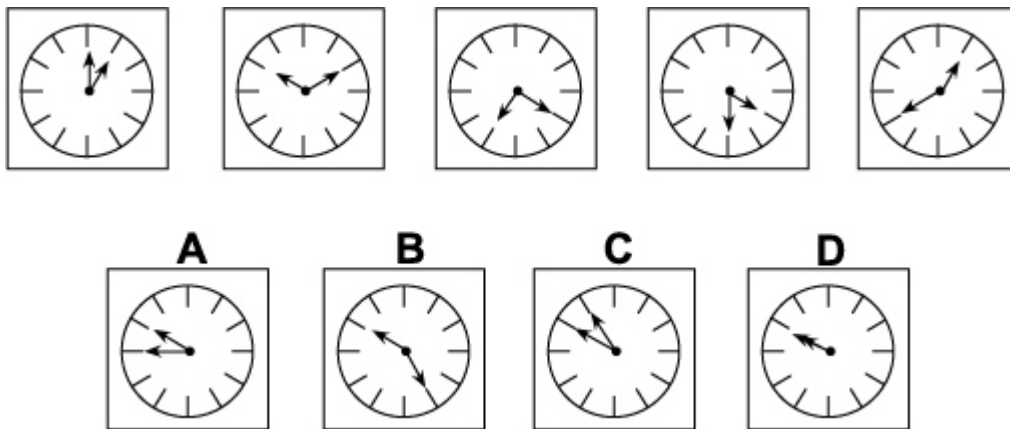
Correct answer: B

Explanation

In this question there are two rules to follow.

The first rule is that the colour of each of the three shapes changes each time. Following this rule, in the next diagram of the sequence the triangle should be white, the square black and the oval white. The correct answer, therefore, could be B, C or D.

The second rule is that the triangle and oval both move one place to the right each time and the square moves one place to the left each time. (When a shape reaches the end of a row it moves to the other end.) Following this rule, the correct answer is B.



Question 16 (id: 11282)

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

Correct answer: D

Explanation

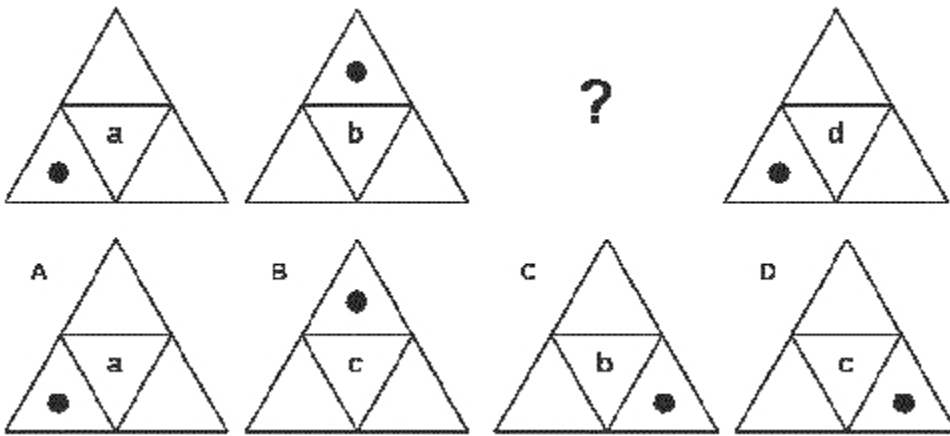
In this question there is a clock face with a short and a long hand. Each time the long hand

rotates by 60° clockwise and the short hand rotates by 90° anticlockwise. Following these rules, in the next diagram of the sequence the long hand should rotate by 60° clockwise from the 8 to the 10, and the short hand should rotate by 90° anticlockwise from the 1 to the 10. Correct answer is D

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.



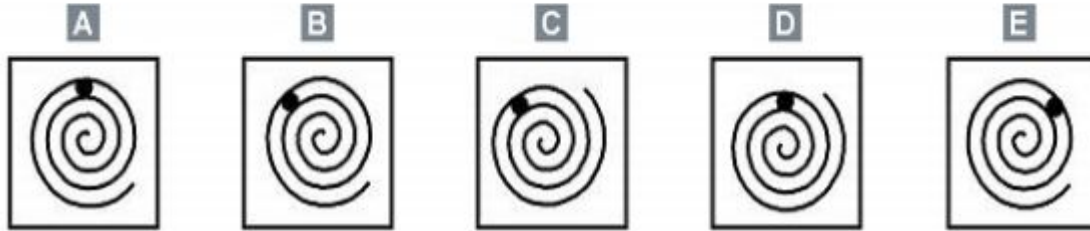
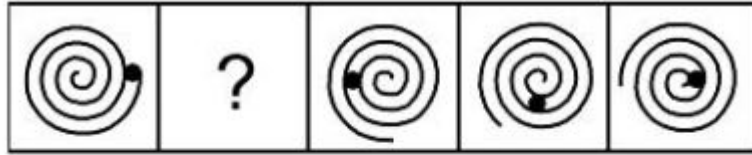
Question 1

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

Correct answer: D

Explanation

The black dot shifts clockwise, while the alphabet in the inner triangle changes from 'a' through 'd'.



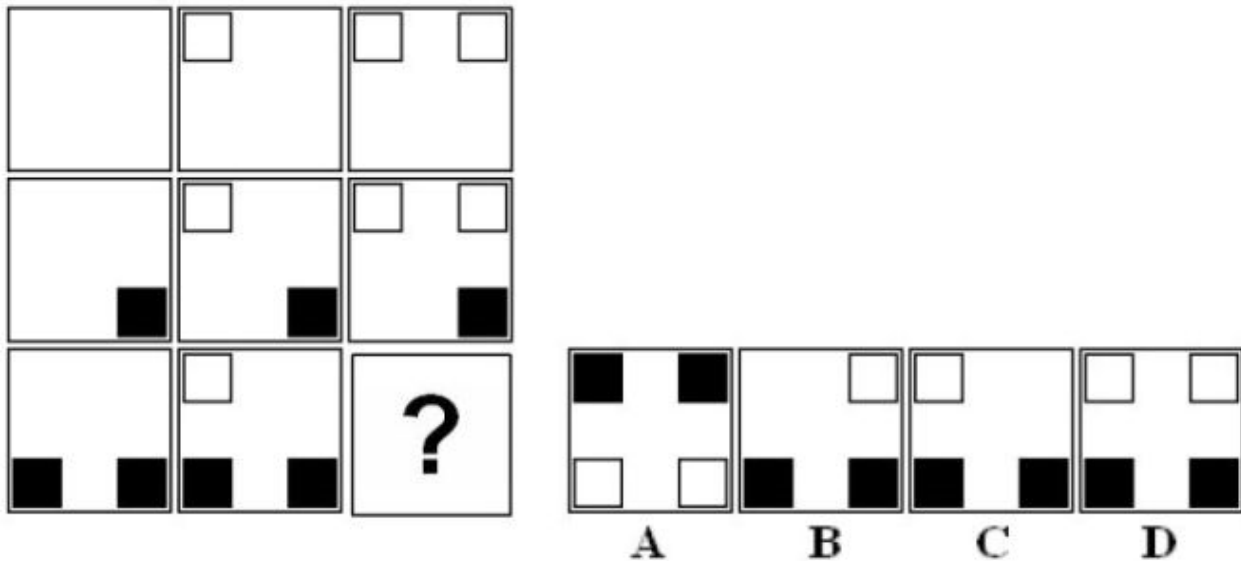
Question 2

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

Correct answer: A

Explanation

In each step, the spiral rotates 45 degrees clockwise while the black dot moves through 270 degrees further in.



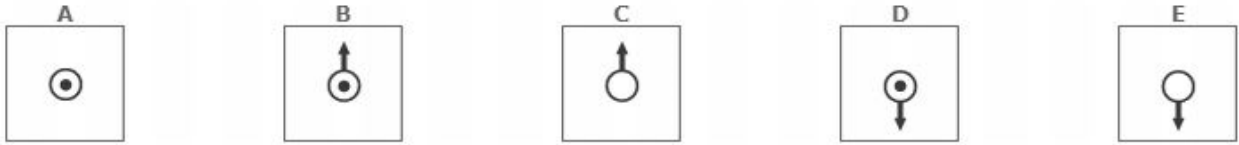
Question 3

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

Correct answer: D

Explanation

The number of squares increases by 1 down each column and across each row



Question 4

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

Correct answer: E

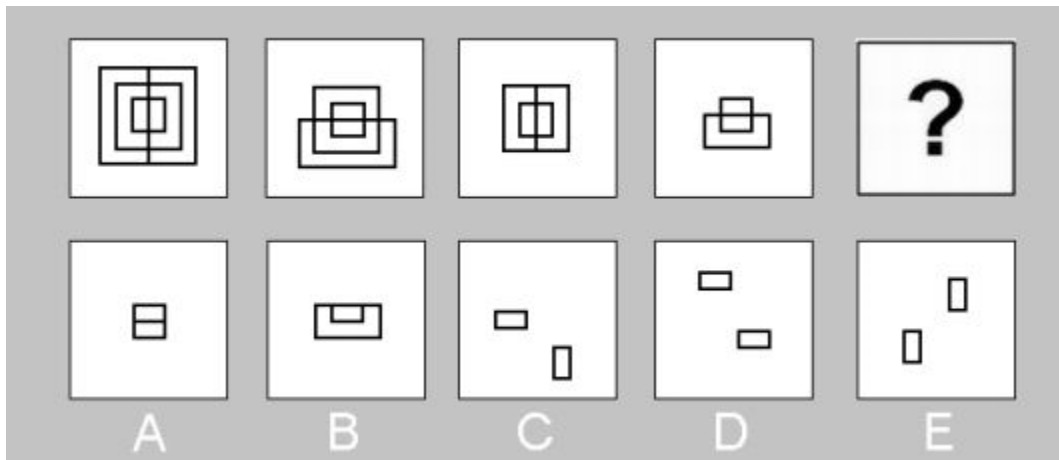
Explanation

Two patterns are apparent:

The arrow direction alternates upward and downward.

The black dot is present only when arrow points downwards.

Following these two patterns, the next figure should be option E.



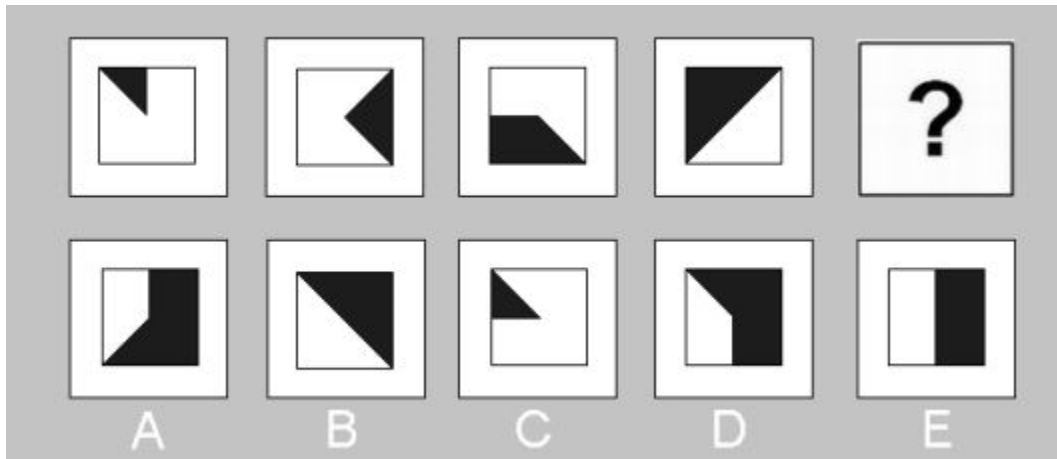
Question 5

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

Correct answer: E

Explanation

The figure is rotated through 90 degrees clockwise and one of the outermost shapes is removed.



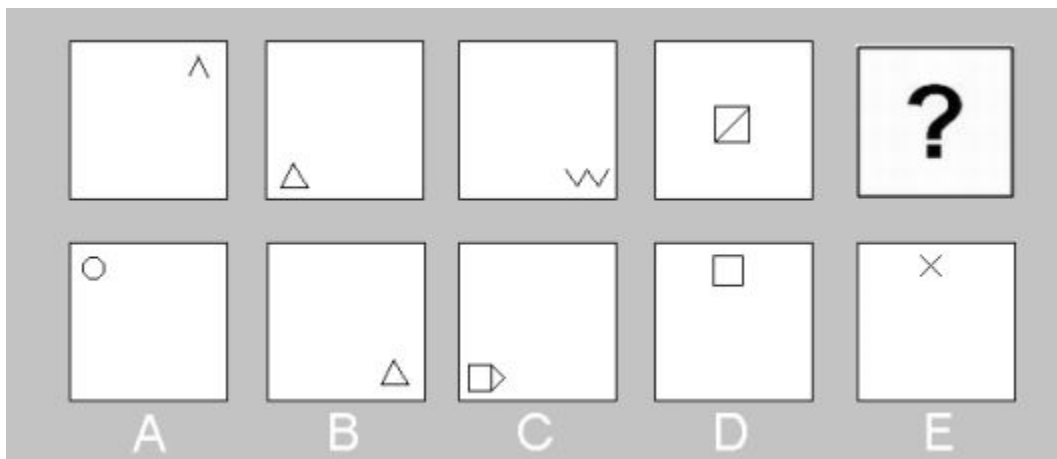
Question 6

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

Correct answer: D

Explanation

In each iteration, the figure rotates 90 degrees clockwise and an extra black triangle is added clockwise to the existing black shape.



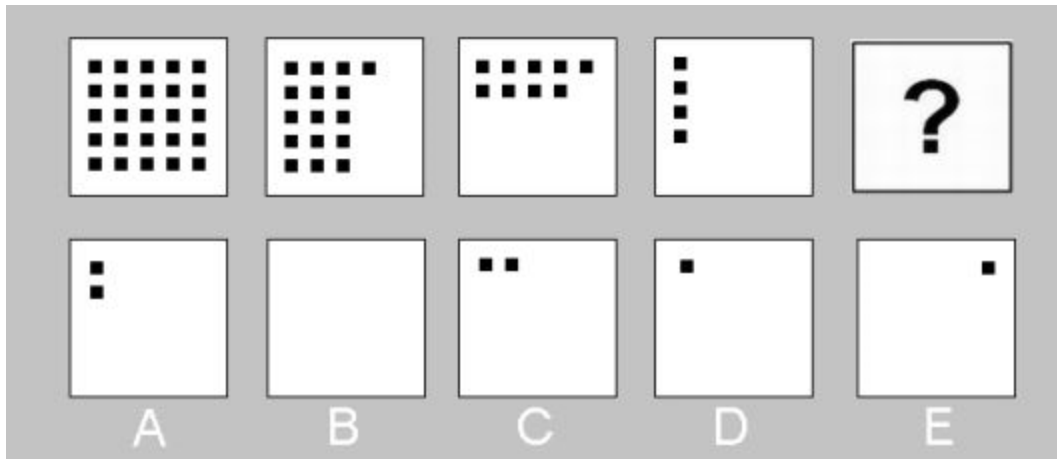
Question 7

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



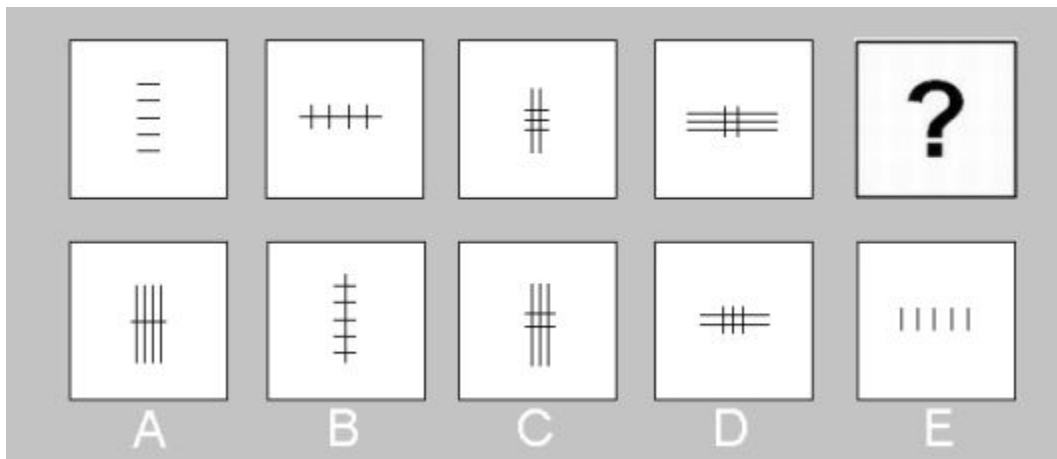
Question 8

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



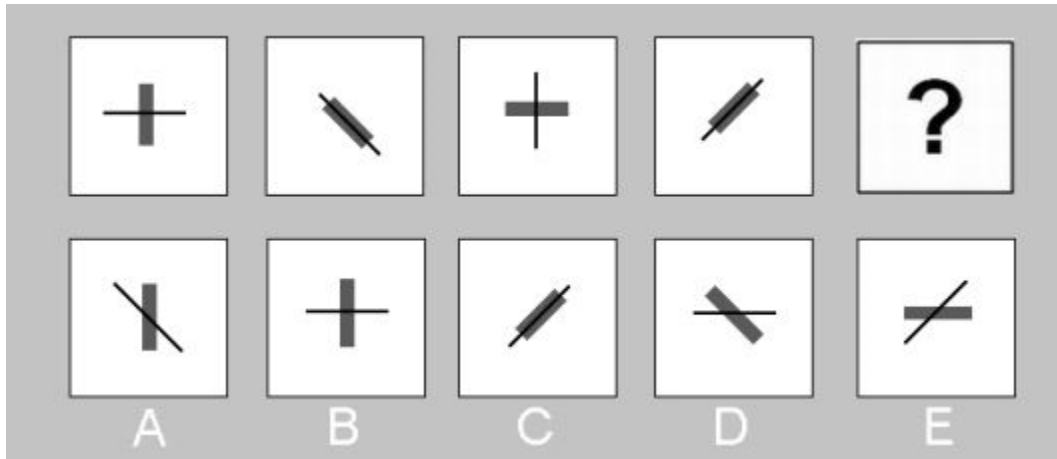
Question 9

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



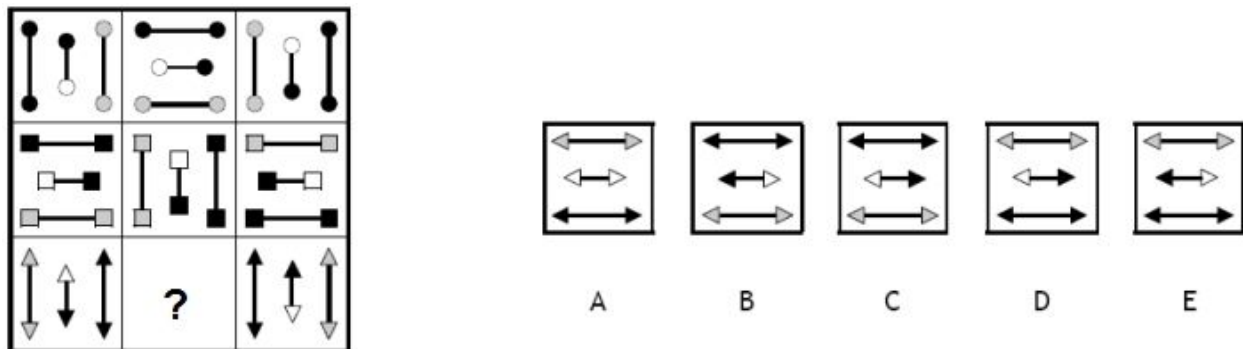
Question 10

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

Correct answer: B

Explanation

The black line rotates by 45 degrees clockwise each time. The thicker line rotates 45 degrees anticlockwise each time, so the answer is B.



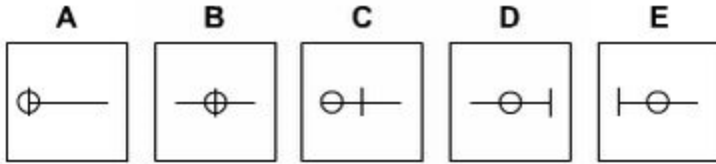
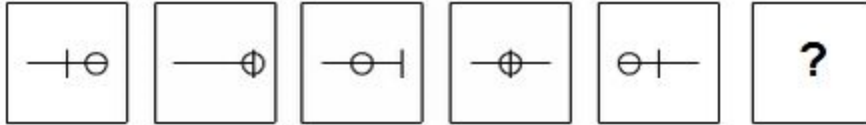
Question 11

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

Correct answer: E

Explanation

Across each row, the figure rotates 90 degrees clockwise.



Question 12

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

Correct answer: A

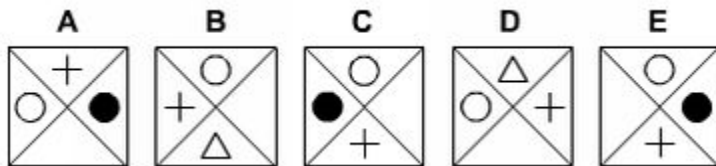
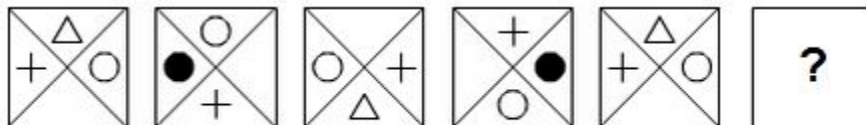
Explanation

The short line and the circle move alternately along the longer line.

To produce the second figure, the short line moves to the right end. Then the circle moves from right end to the middle to produce the third figure. Then the short line moves from right end to the middle to produce the fourth figure.

The the circle moves from the middle to the left end to produce the fifth figure.

Therefore, to get the next figure, the short line must move to the left end.



Question 13

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

Correct answer: C

Explanation

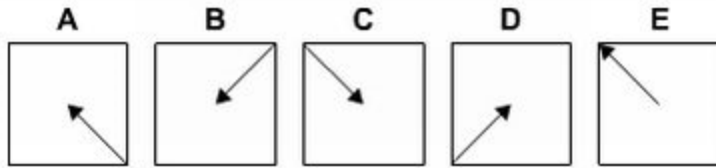
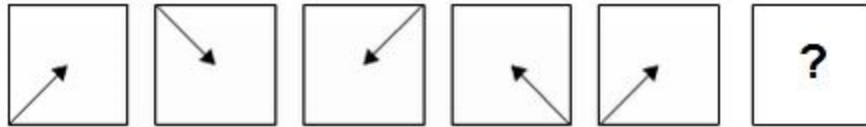
The figure is divided into four sectors. The following patterns are apparent:

The clear circle and the plus (+) sign move from sector to sector anticlockwise.

The triangle disappears and reappears at the opposite sector after two iterations.

The black circle disappears and reappears at the opposite sector after two iterations.

Following these rules, the next figure should be option C



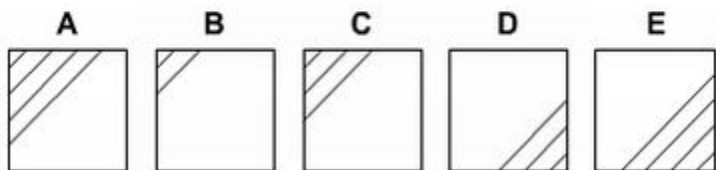
Question 14

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

Correct answer: C

Explanation

The arrow moves from corner to corner clockwise



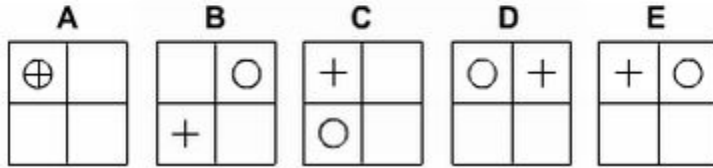
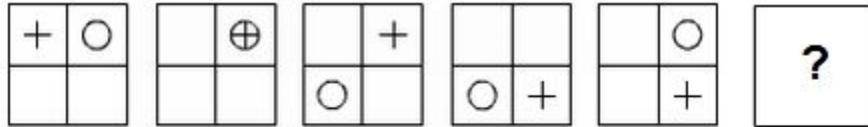
Question 15

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

Correct answer: A

Explanation

The number of lines increase from two to four and the sequence repeats. Also, the position of the lines alternate between bottom-right and top left. Following these rules, the next figure should have four lines located top-left.



Question 16

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

Correct answer: B

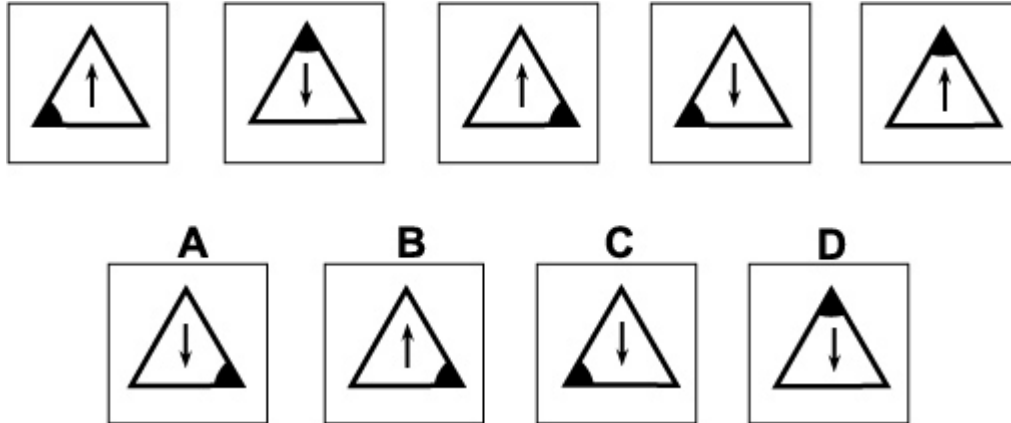
Explanation

Two rules apply in succession. The plus (+) sign rotates through 90 degrees clockwise. Thereafter, the circle rotates through 180 degrees clockwise.

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?

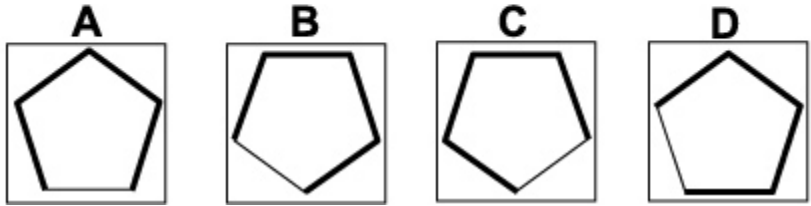
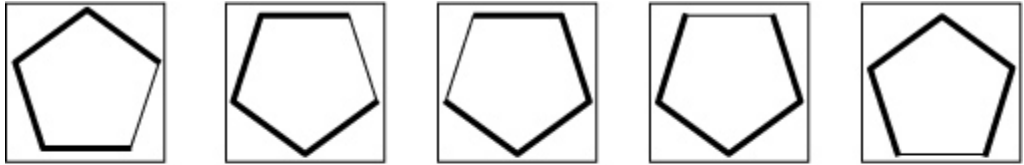
Correct answer: A

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

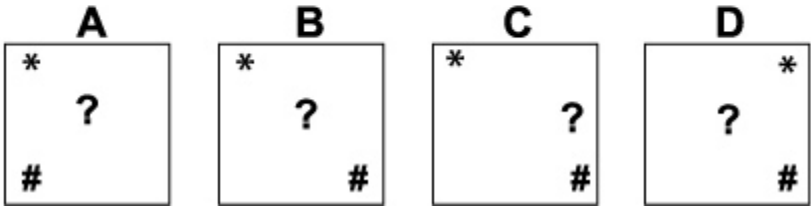
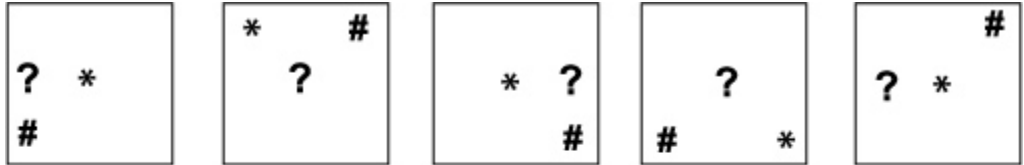
There is a regular pentagon with one edge thinner than the others. There are three rules that are applied one after the other:

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

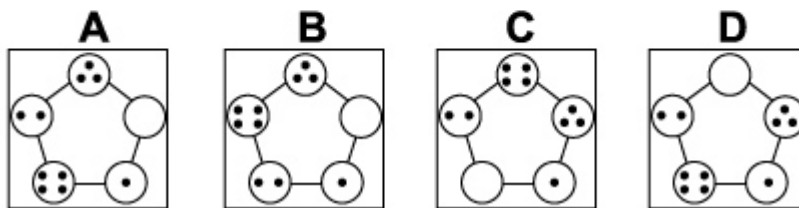
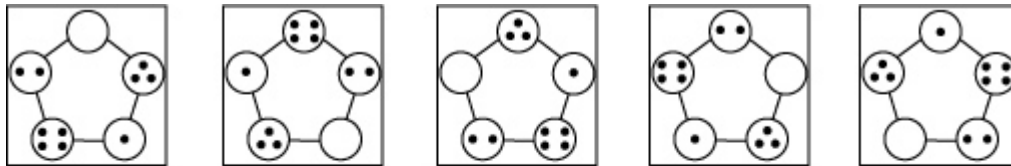
Explanation

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

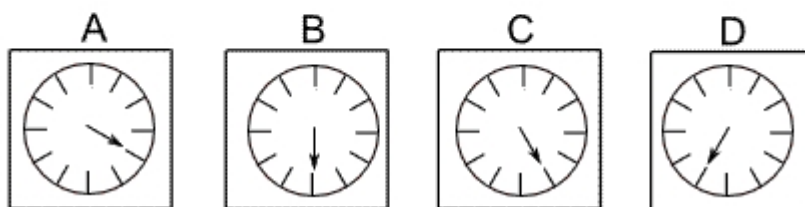
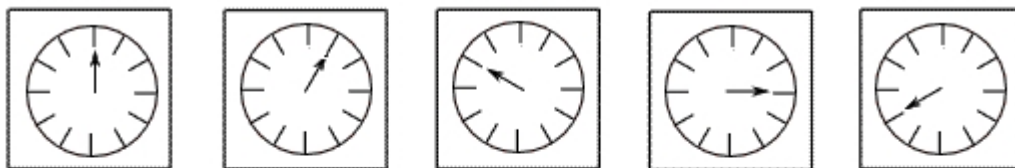
Explanation

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

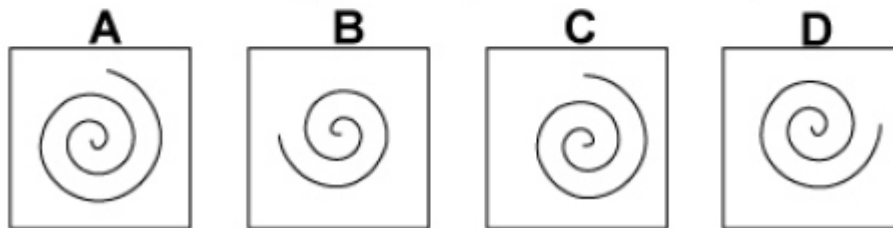
Explanation

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

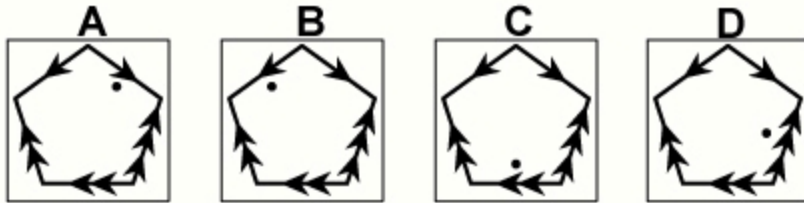
Two rules apply:

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?

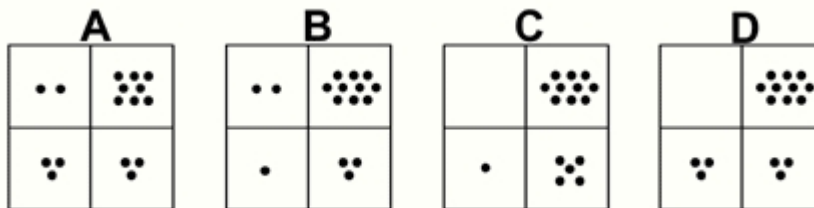
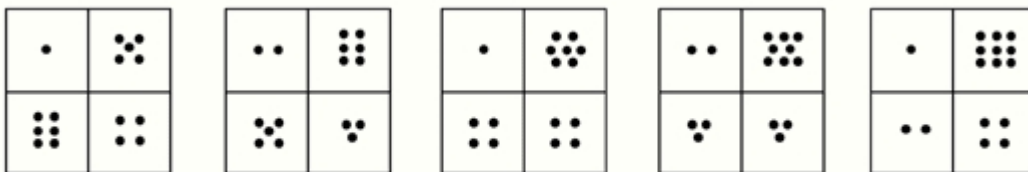
Correct answer: A

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

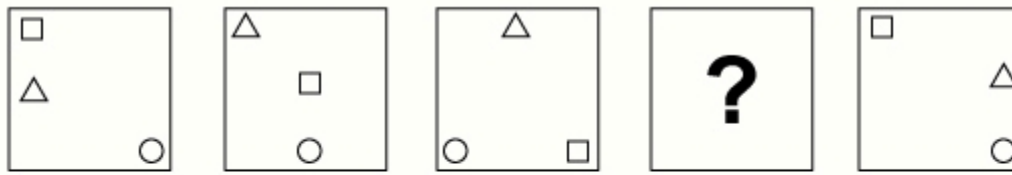
Explanation

There are two rules to follow that are applied alternately.

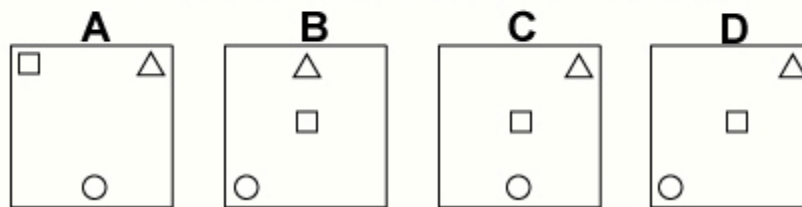
The first rule is that the numbers of dots in the top row increase by one while the numbers of dots in the second row decrease by one.

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

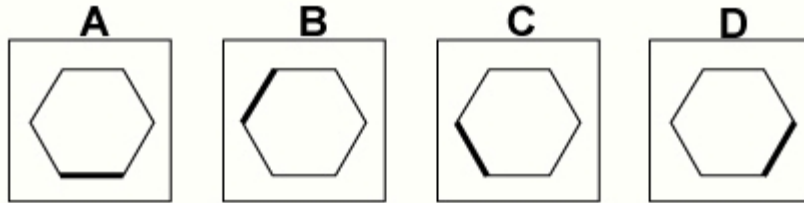
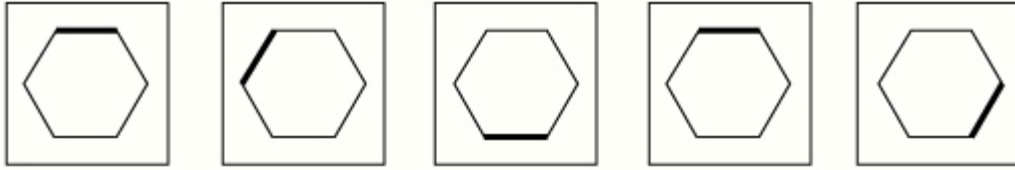
Each of the three shapes has its own rule to follow.

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?

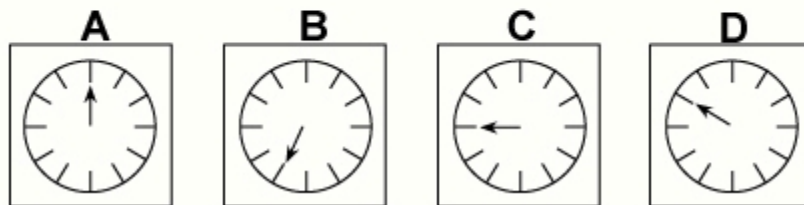
Correct answer: A

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

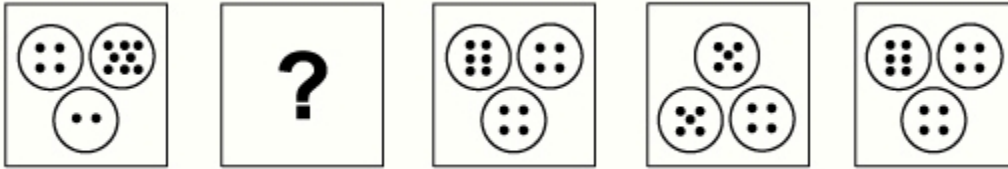
Which of the options is the next shape in the sequence?

Correct answer: D

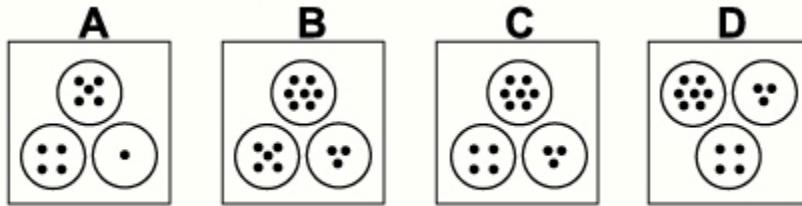
Explanation

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.

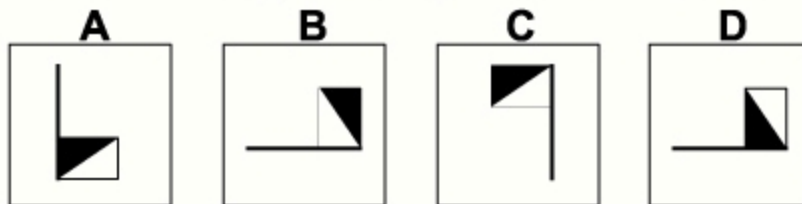
Following this rule, the missing diagram of the sequence could be A, B or C.

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.

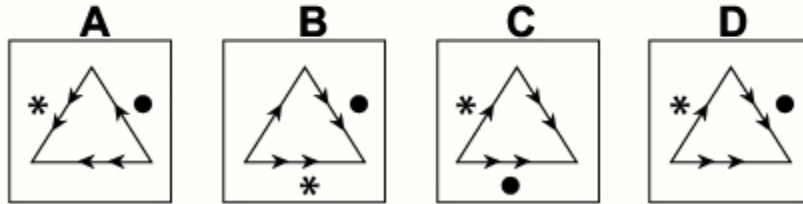
The first rule is that the flag is reflected in the vertical axis.

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

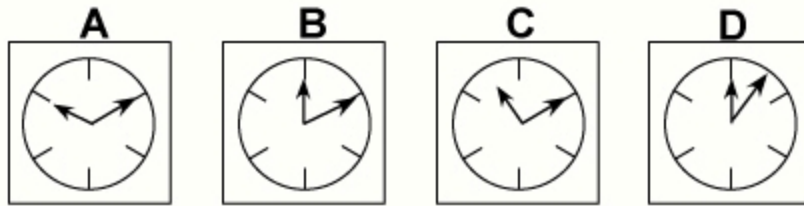
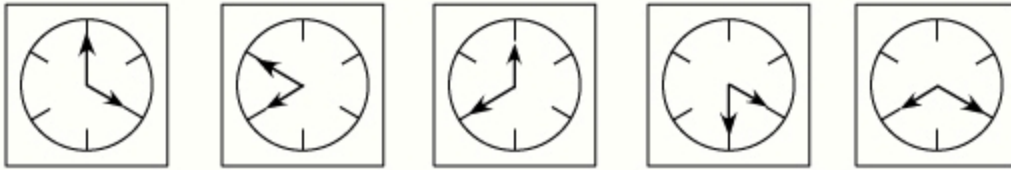
Explanation

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?

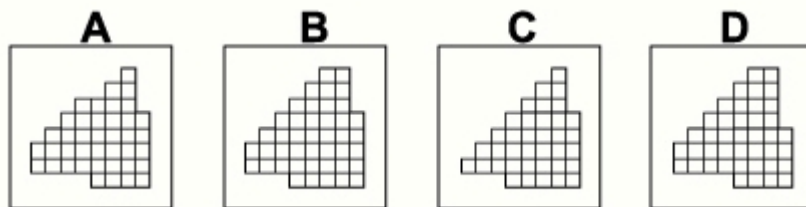
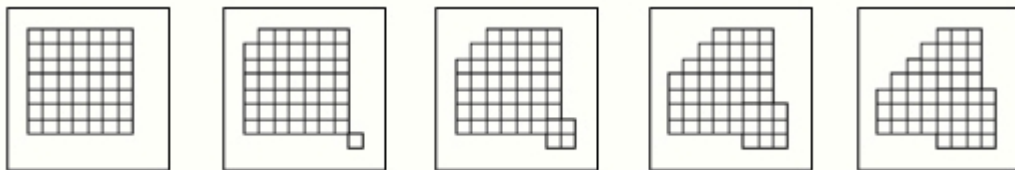
Correct answer: B

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

NNPC APTITUDE TEST

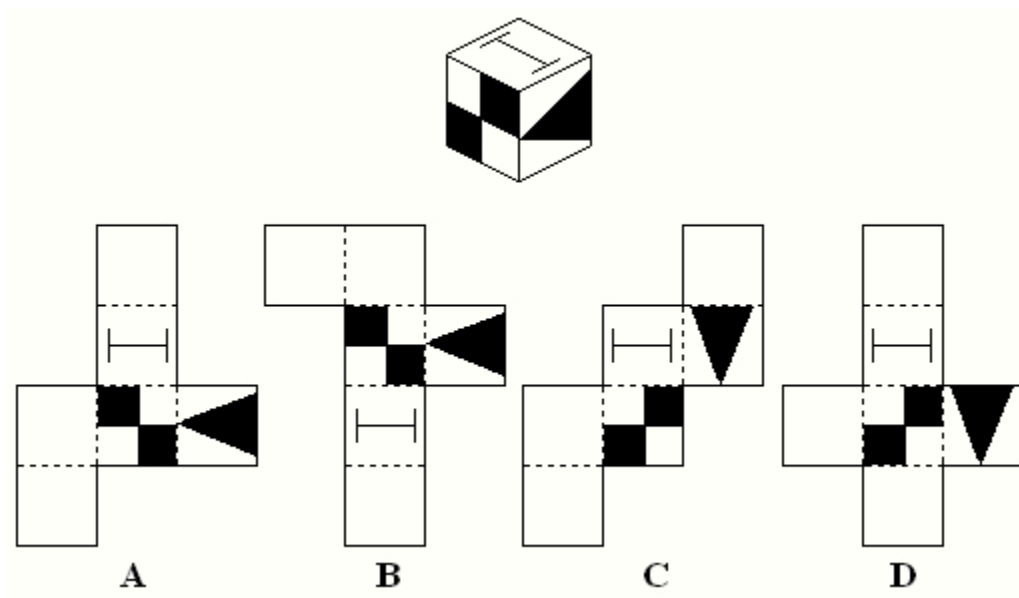
PAST QUESTIONS AND SOLUTIONS

Spatial Reasoning (15 mins for 15 qtns)

TEST ONE:

Spatial Reasoning - Instructions

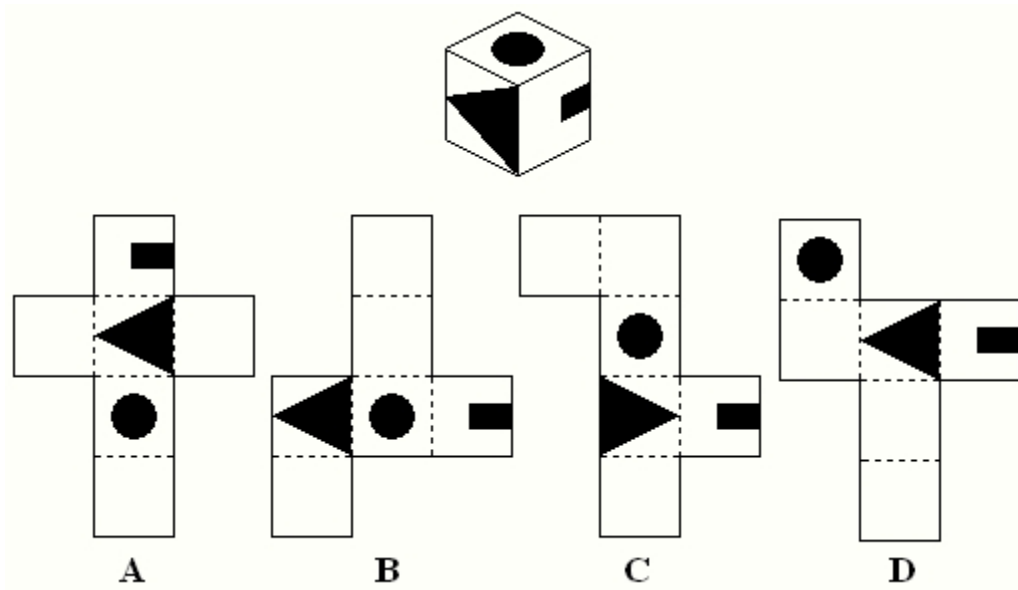
There are 15 questions in this test and you should answer as many as you can.



Question 1

Which pattern can be folded to make the cube shown?

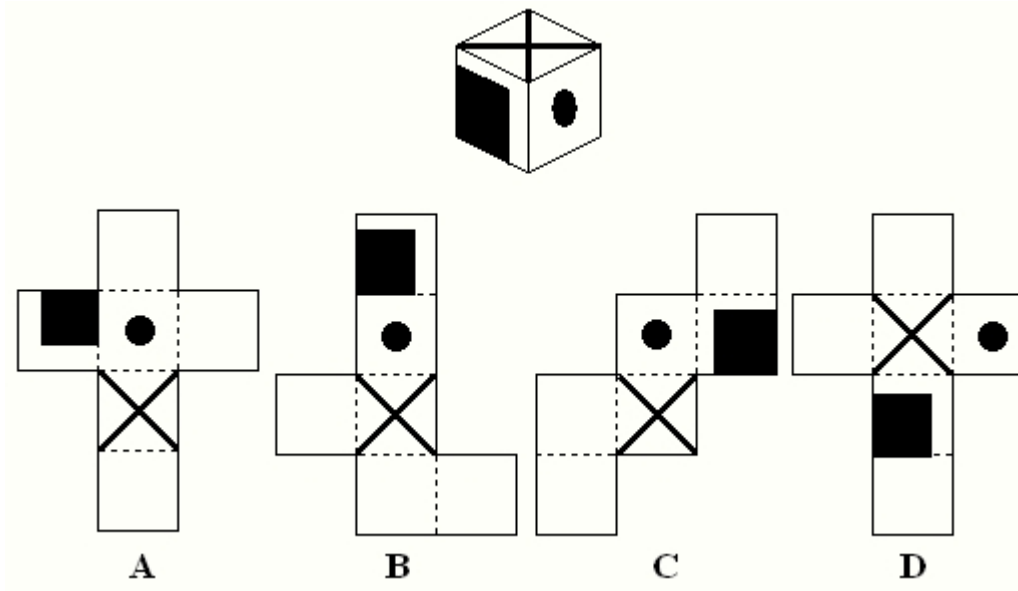
Correct answer: C



Question 2

Which pattern can be folded to make the cube shown?

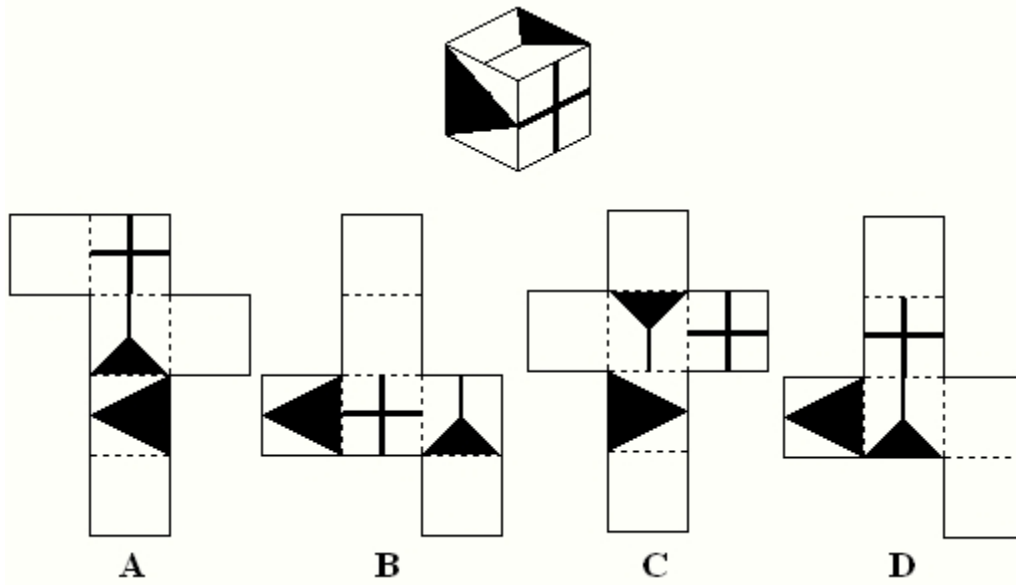
Correct answer: D



Question 3

Which pattern can be folded to make the cube shown?

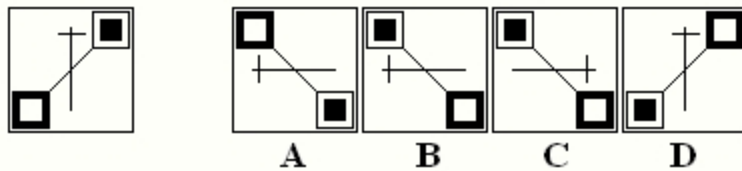
Correct answer: D



Question 4

Which pattern can be folded to make the cube shown?

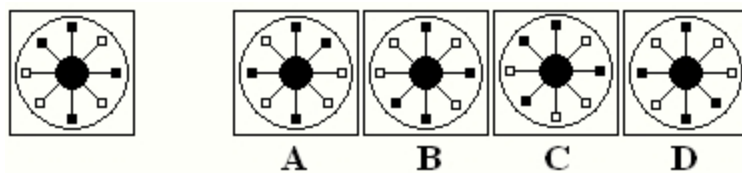
Correct answer: C



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?

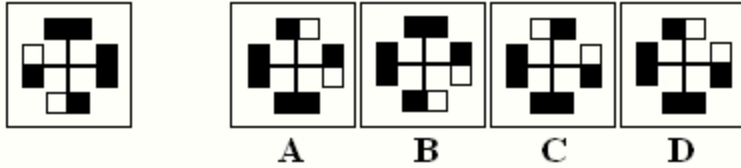
Correct answer: B



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?

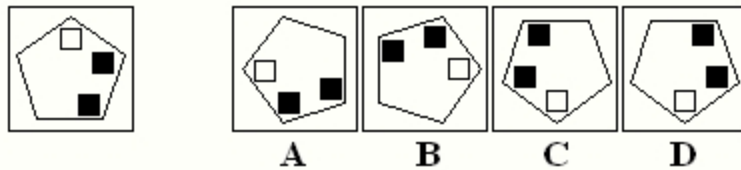
Correct answer: D



Question 7

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?

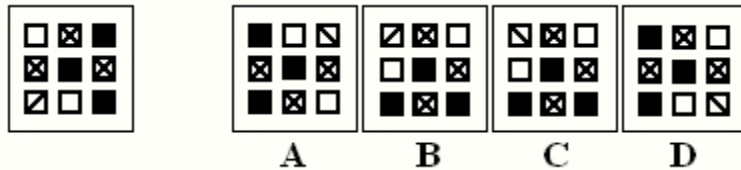
Correct answer: A



Question 8

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?

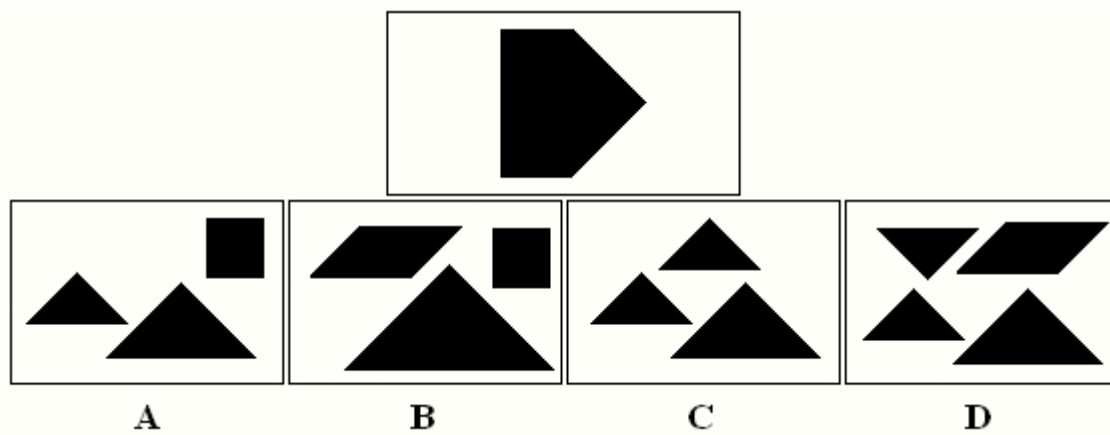
Correct answer: C



Question 9

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?

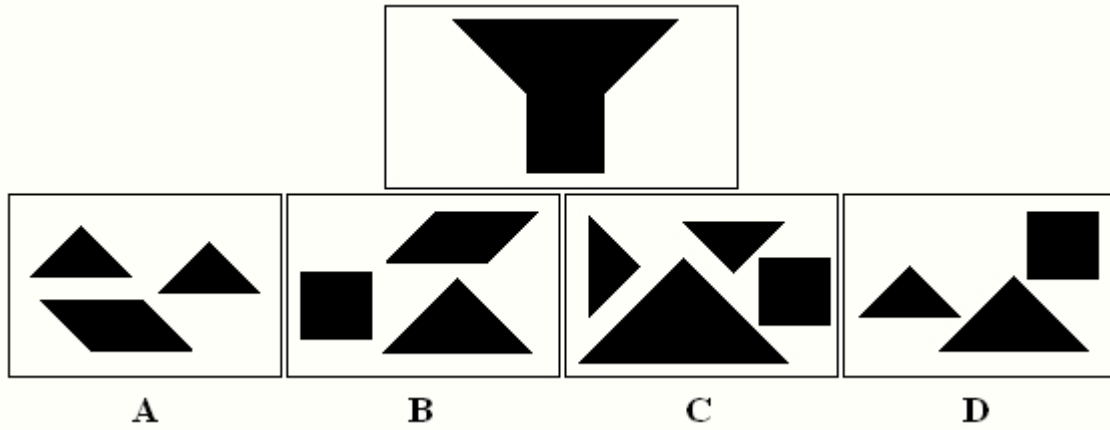
Correct answer: C



Question 10

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

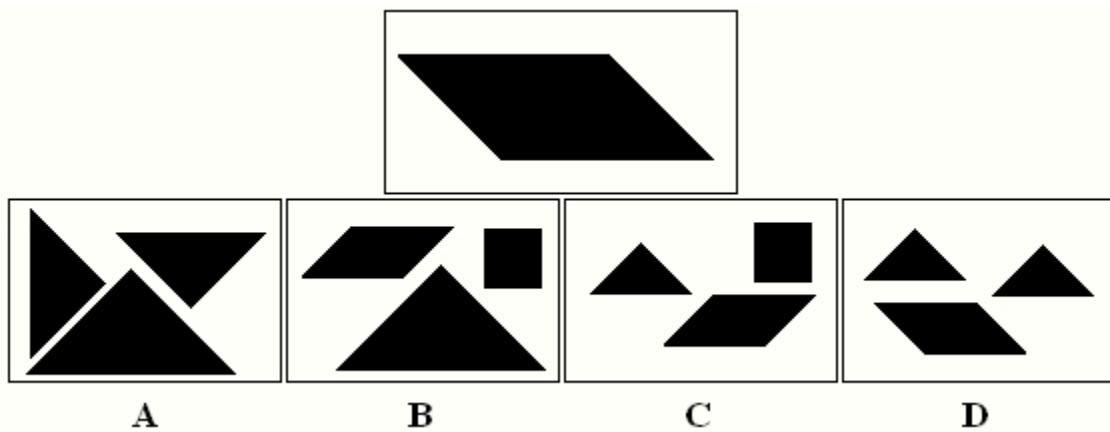
Correct answer: D



Question 11

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

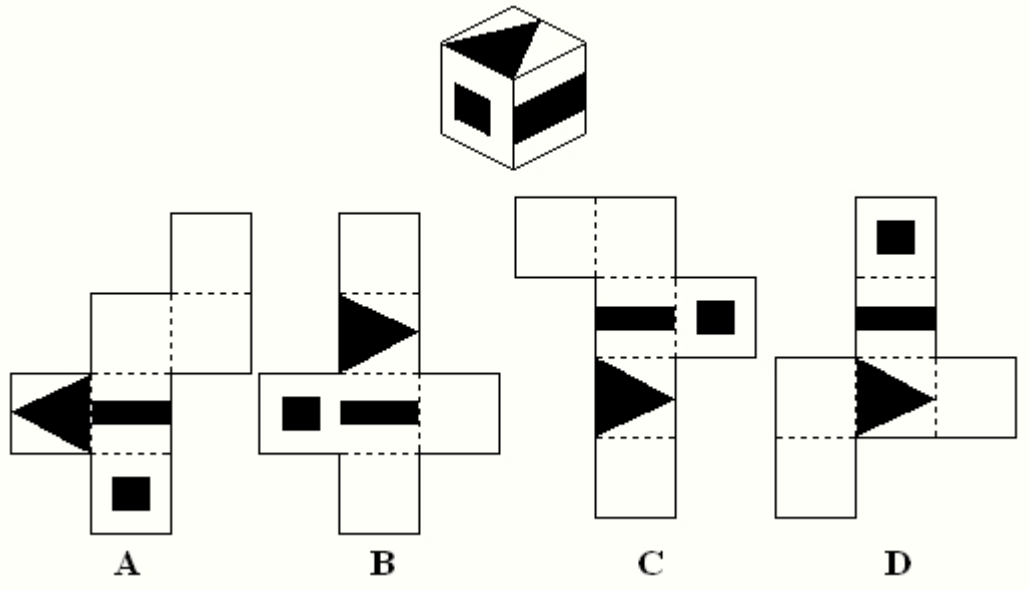
Correct answer: B



Question 12

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

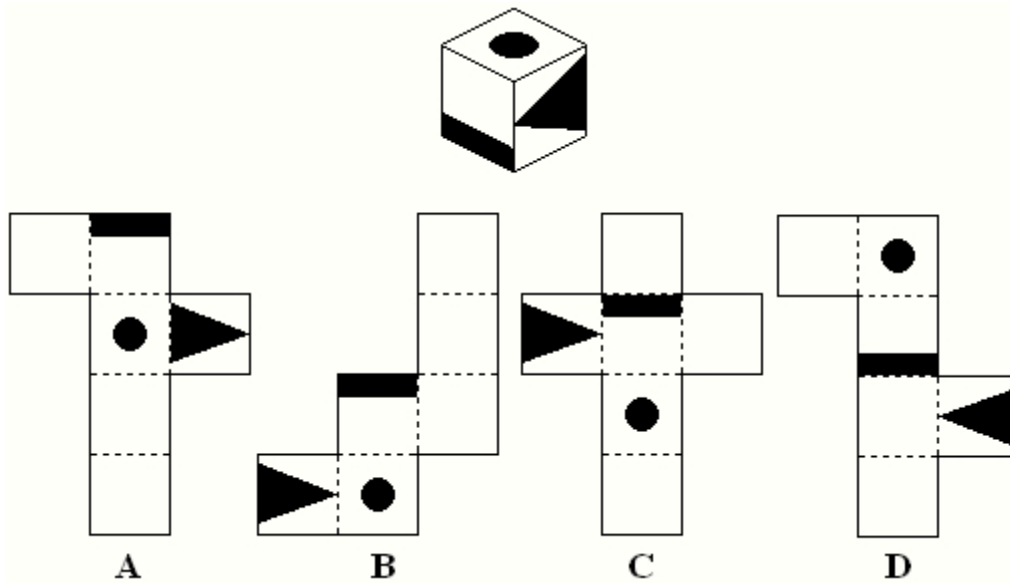
Correct answer: A



Question 13

Which pattern can be folded to make the cube shown?

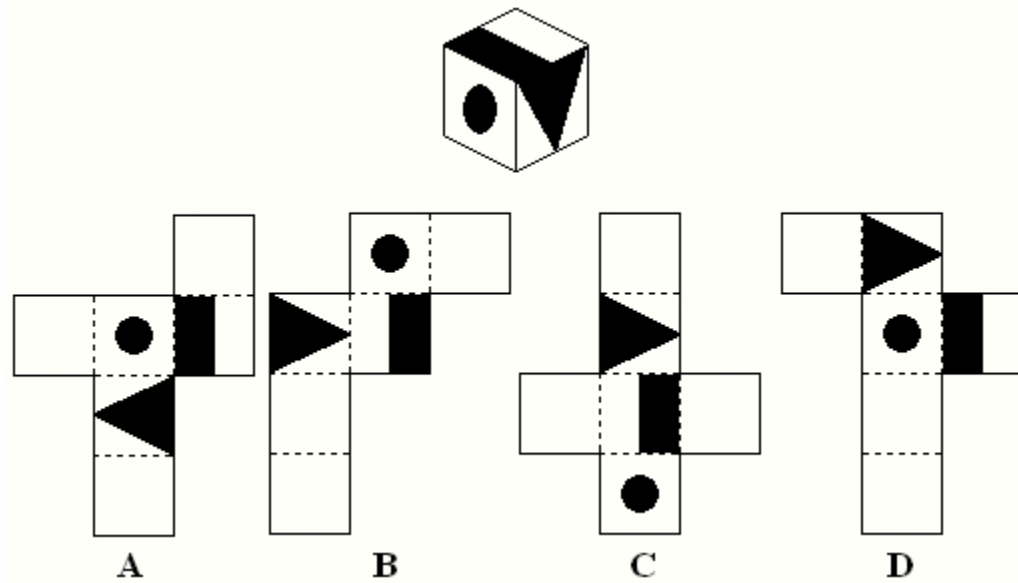
Correct answer: B



Question 14

Which pattern can be folded to make the cube shown?

Correct answer: C



Question 15

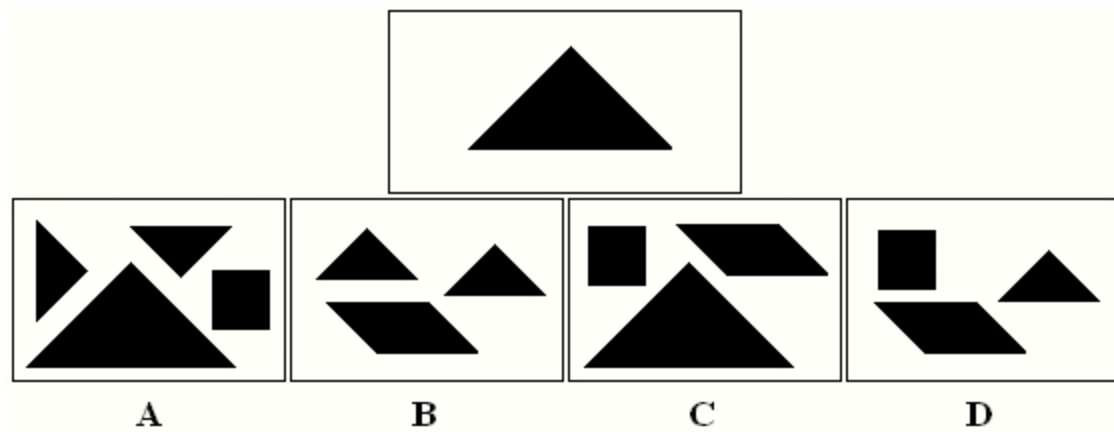
Which pattern can be folded to make the cube shown?

Correct answer: A

TEST TWO:

Spatial Reasoning - Instructions

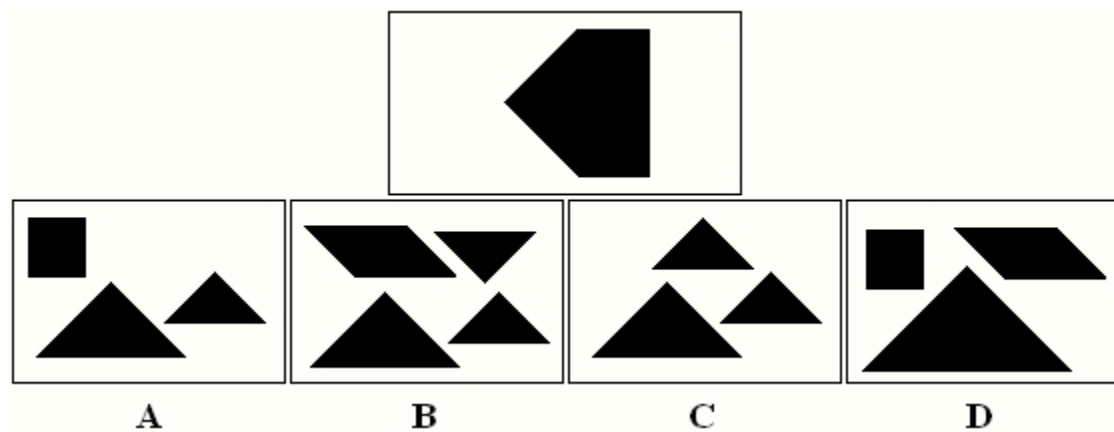
There are 15 questions in this test and you should answer as many as you can.



Question 1 (id: 11345)

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

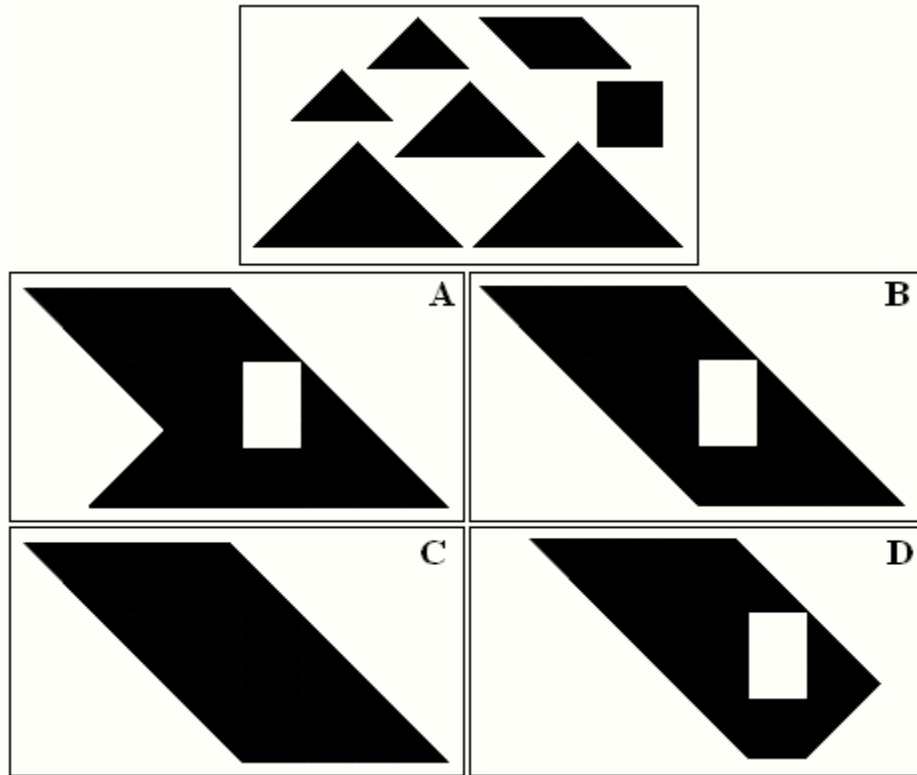
Correct answer: B



Question 2

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

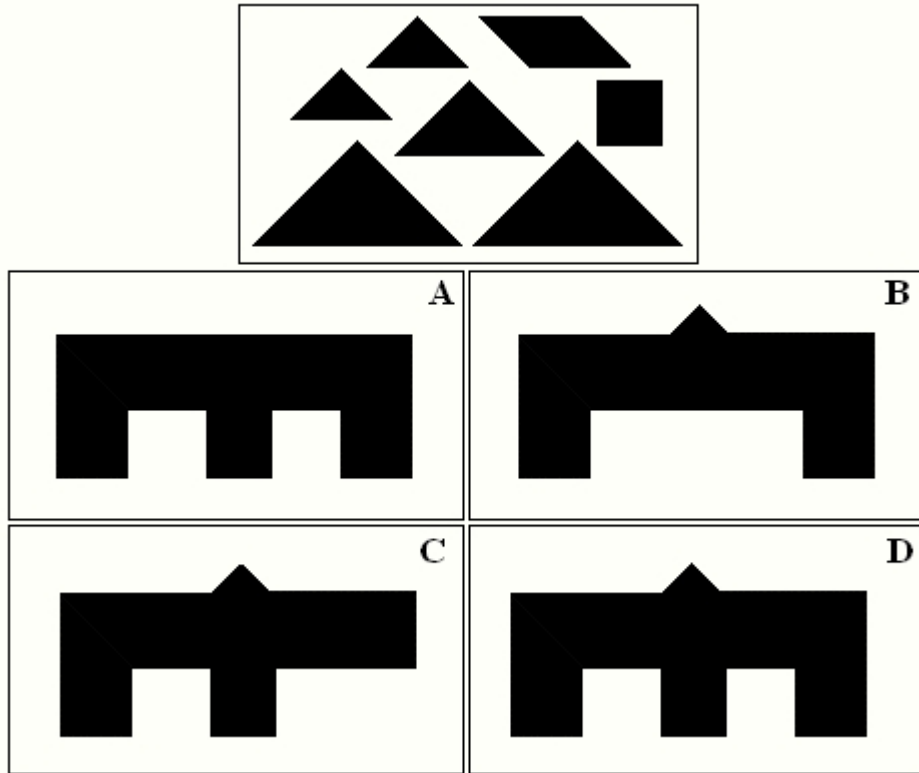
Correct answer: B



Question 3

Which shape can be assembled using all of the individual shapes shown?

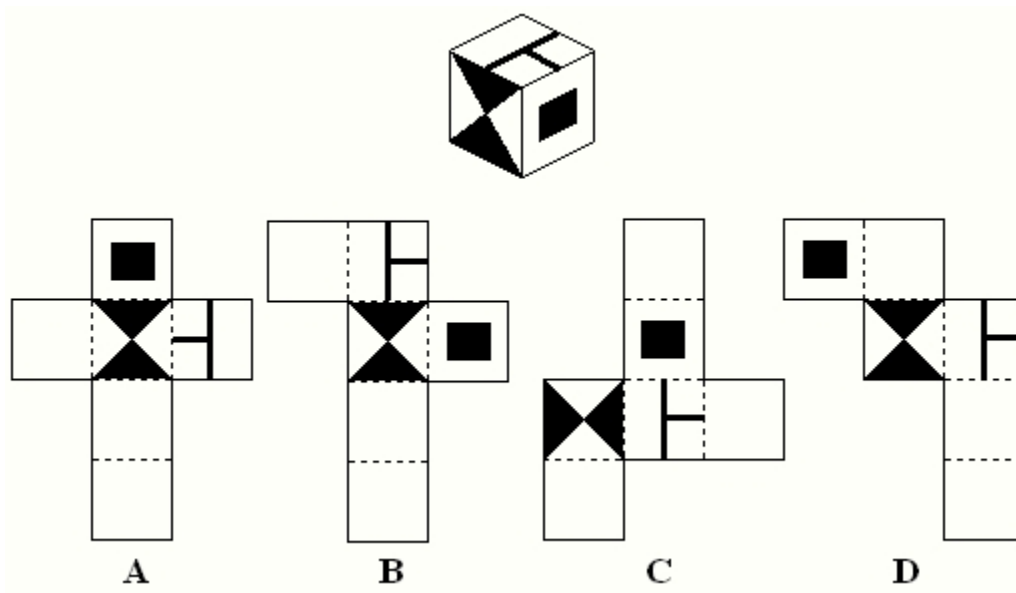
Correct answer: B



Question 4

Which shape can be assembled using all of the individual shapes shown?

Correct answer: D



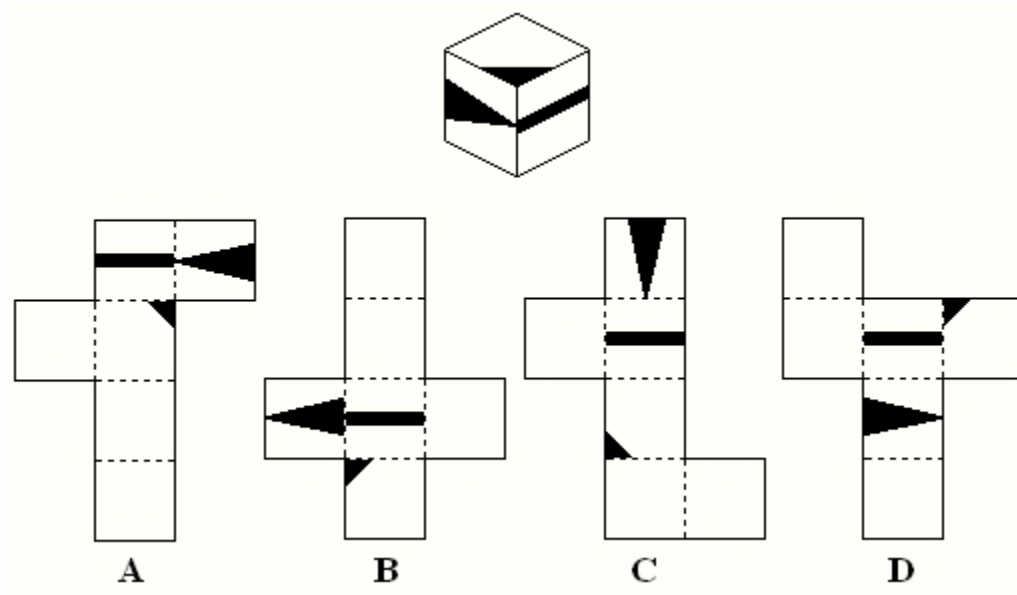
Question 5

Which pattern can be folded to make the cube shown?

Correct answer: B

Explanation

The key to this kind of questions is to remember that only three faces of the cube is shown in the illustration. This means that you need only to consider the relationship between the three visible elements shown on the cube and see if the same relationship exists in the patterns.



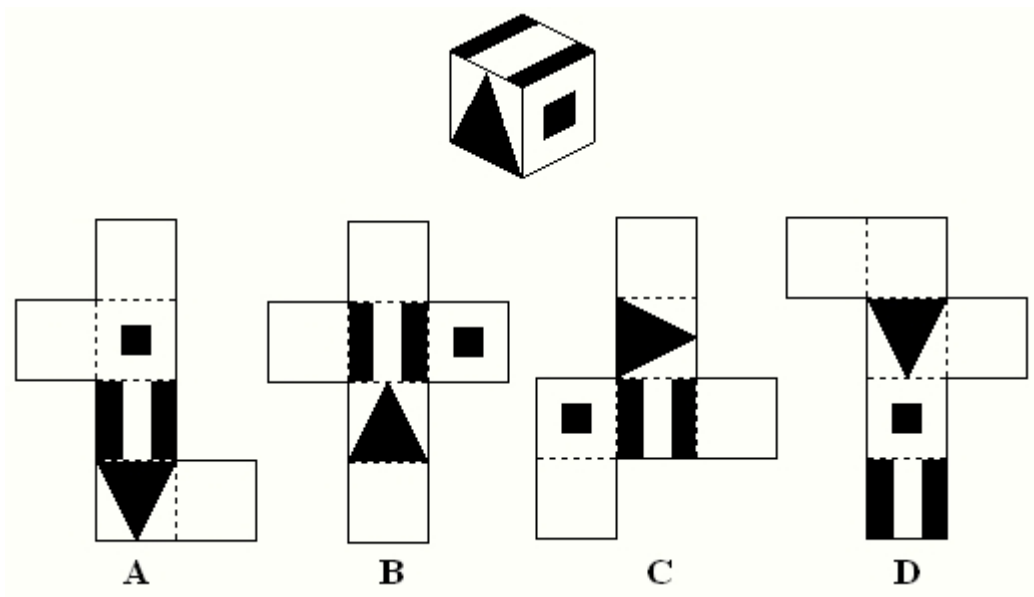
Question 6

Which pattern can be folded to make the cube shown?

Correct answer: A

Explanation

The key to this kind of questions is to remember that only three faces of the cube is shown in the illustration. This means that you need only to consider the relationship between the three visible elements shown on the cube and see if the same relationship exists in the patterns.



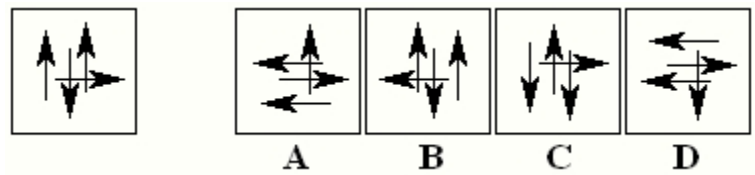
Question 7

Which pattern can be folded to make the cube shown?

Correct answer: B

Explanation

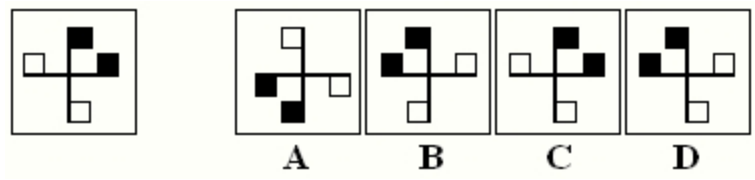
The key to this kind of questions is to remember that only three faces of the cube is shown in the illustration. This means that you need only to consider the relationship between the three visible elements shown on the cube and see if the same relationship exists in the patterns.



Question 8

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

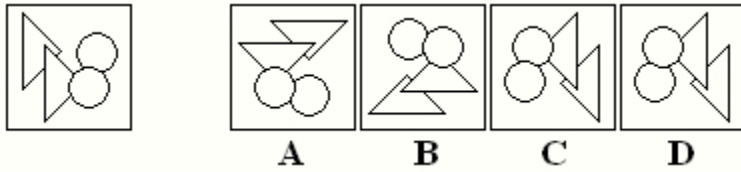


Question 9

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

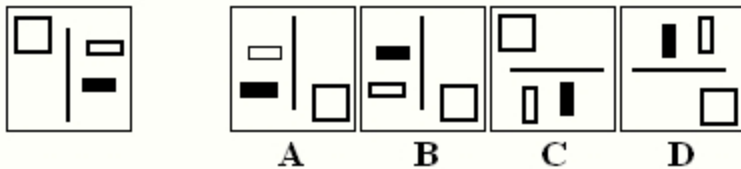


Question 10

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

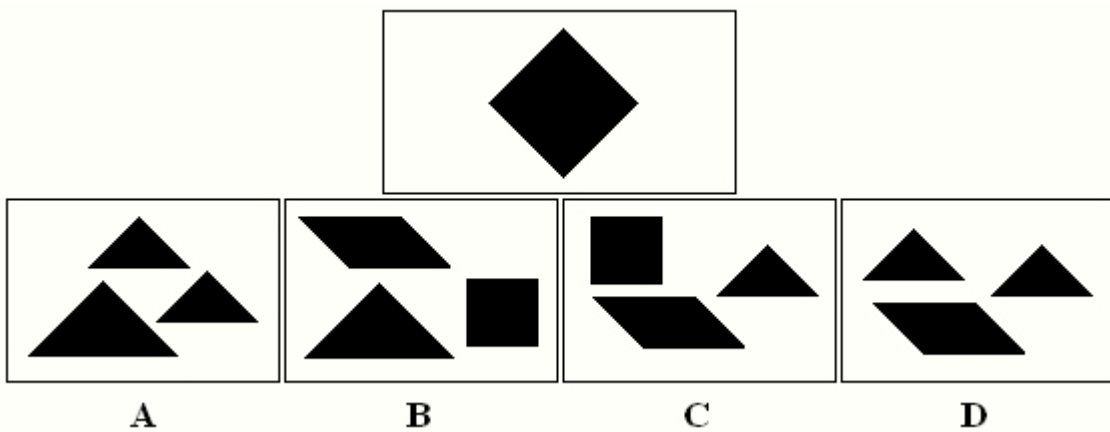


Question 11

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?

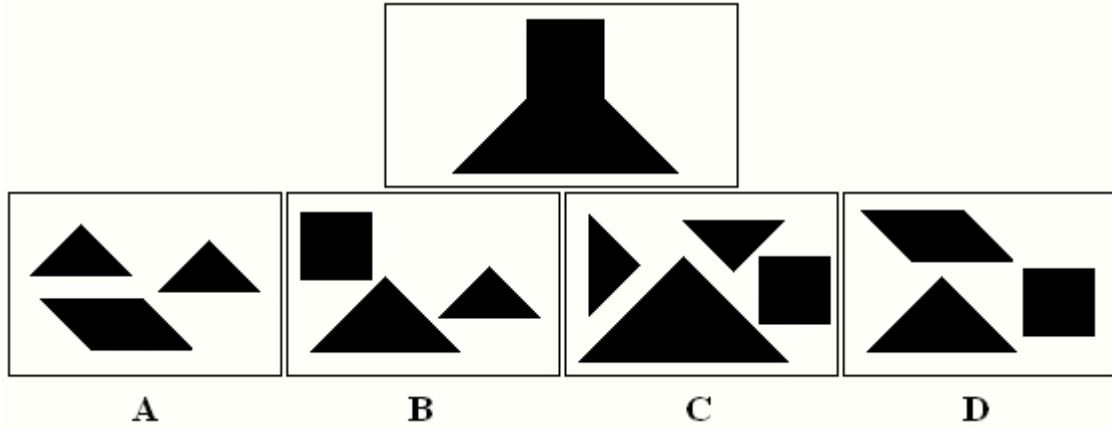
Correct answer: B



Question 12

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

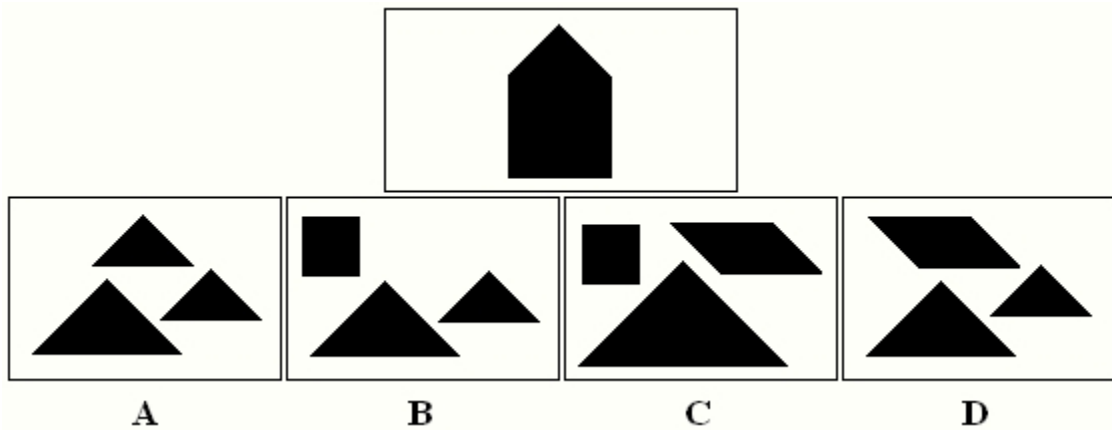
Correct answer: A



Question 13

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

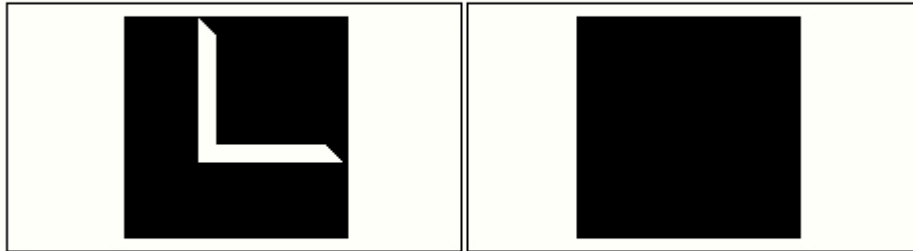
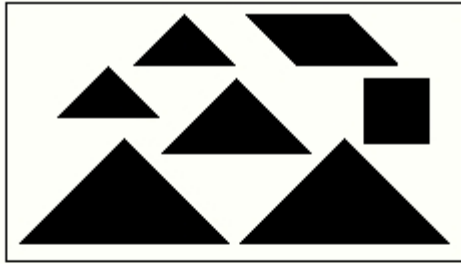
Correct answer: D



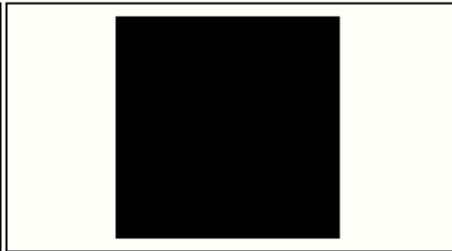
Question 14

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

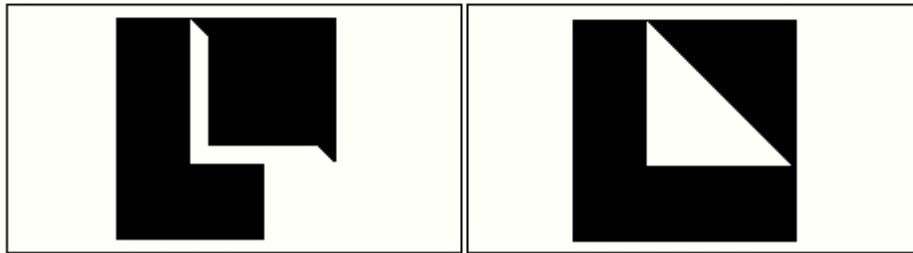
Correct answer: D



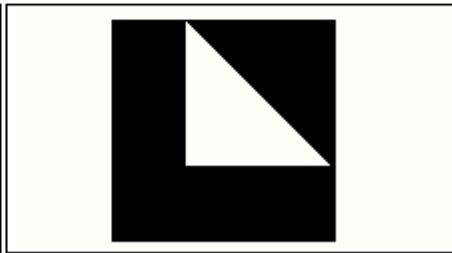
A



B



C



D

Question 15

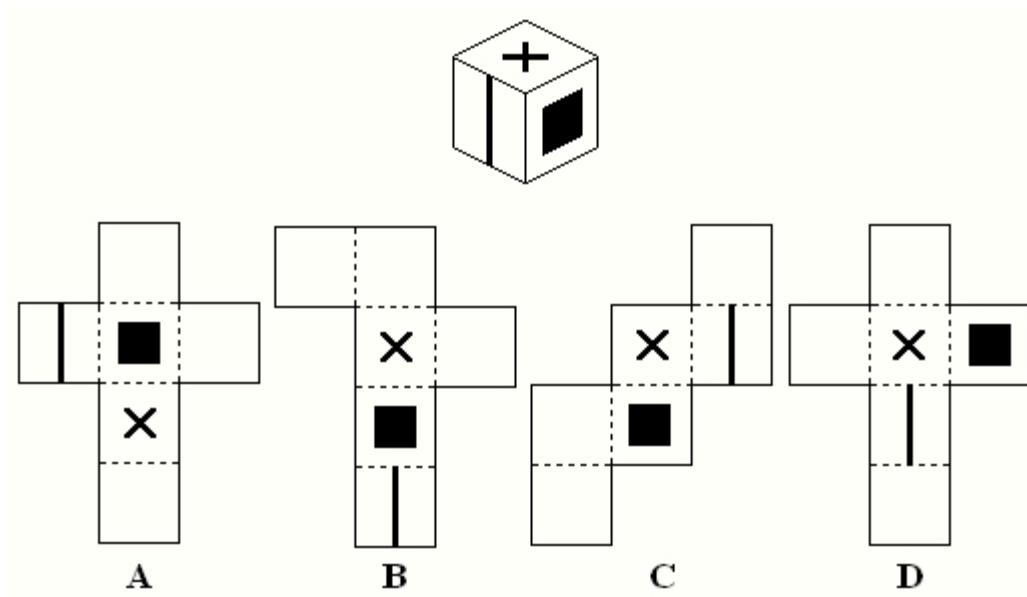
Which shape can be assembled using all of the individual shapes shown?

Correct answer: A

TEST THREE:

Spatial Reasoning - Instructions

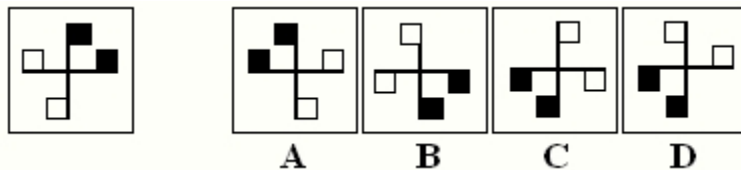
There are 15 questions in this test and you should answer as many as you can.



Question 1

Which pattern can be folded to make the cube shown?

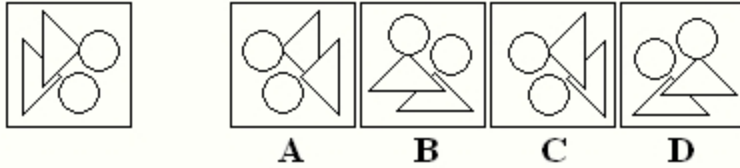
Correct answer: D



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?

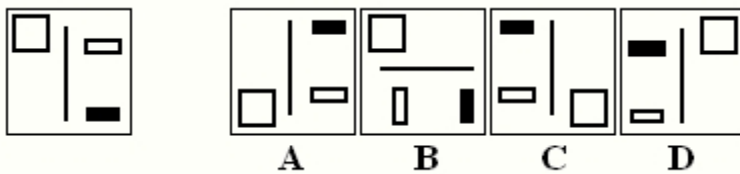
Correct answer: C



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

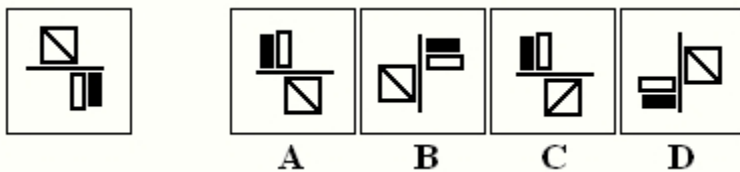


Question 4

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:

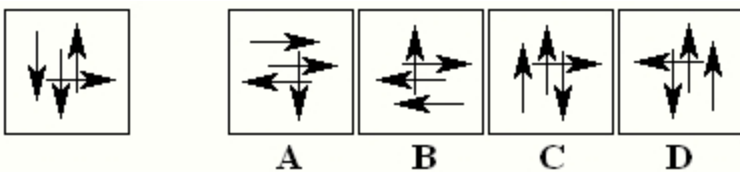
Correct answer: C



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?

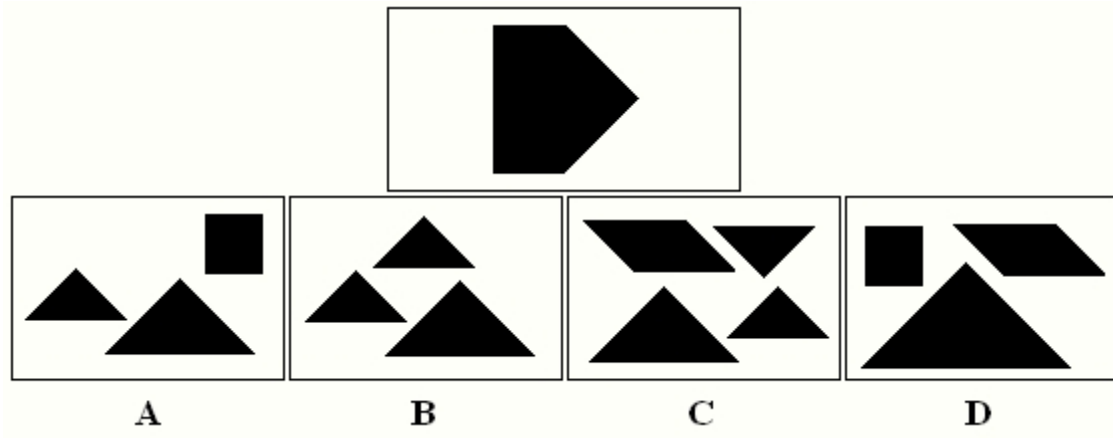
Correct answer: A



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?

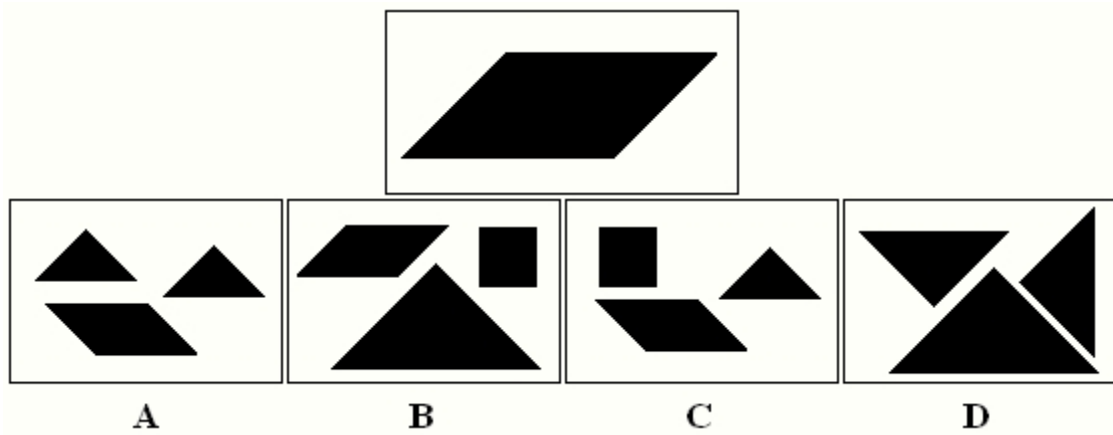
Correct answer: D



Question 7

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

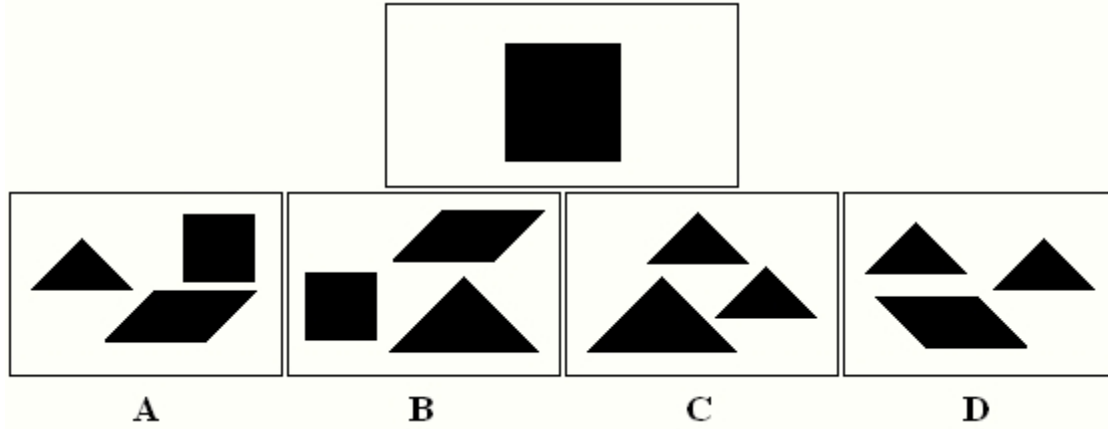
Correct answer: C



Question 8

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

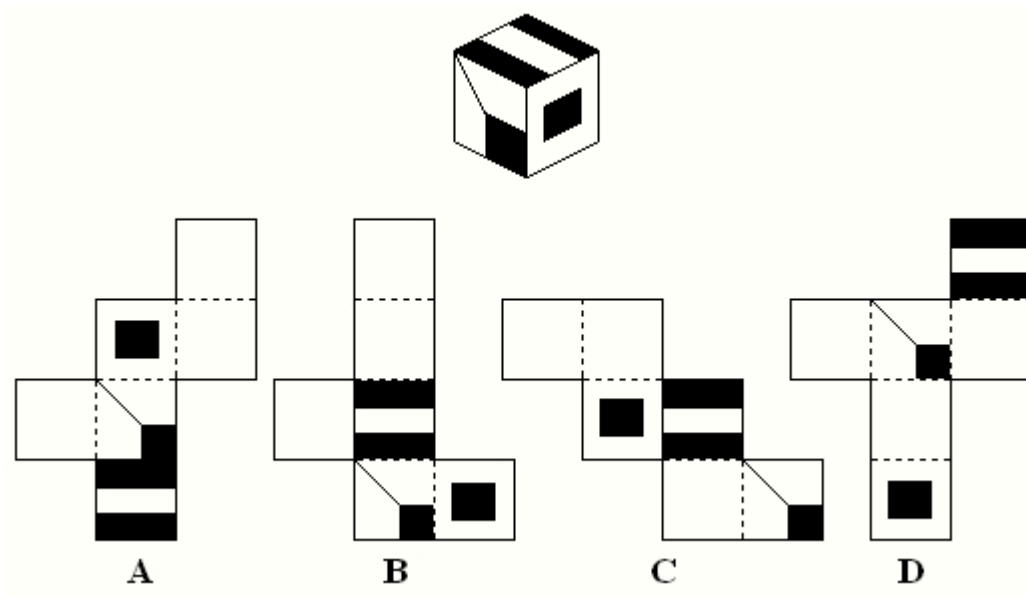
Correct answer: D



Question 9

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

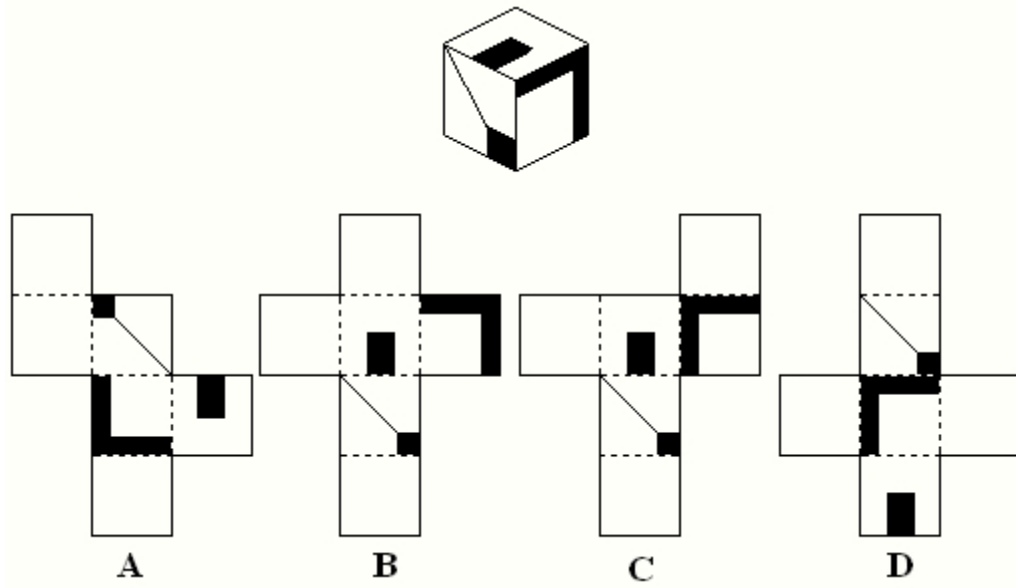
Correct answer: C



Question 10

Which pattern can be folded to make the cube shown?

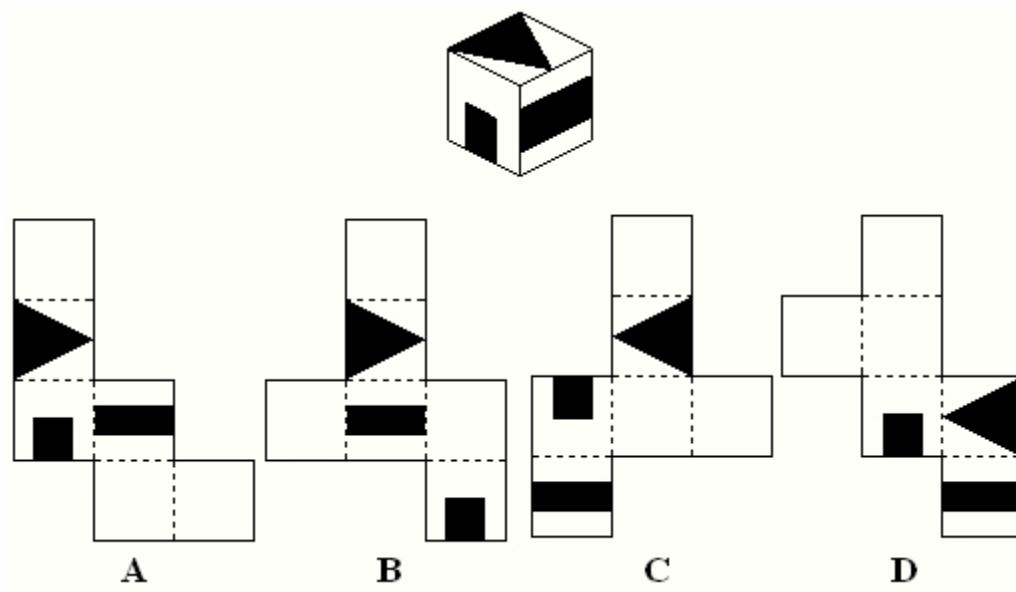
Correct answer: B



Question 11

Which pattern can be folded to make the cube shown?

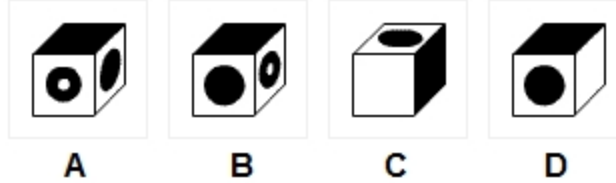
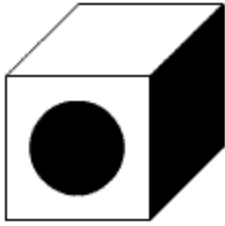
Correct answer: C



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

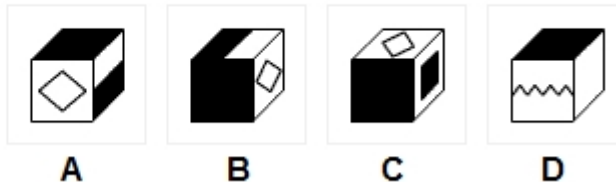
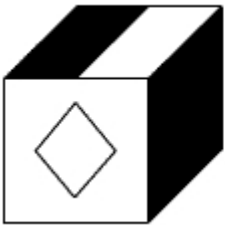
Remember that only three faces of a cube can be shown in an illustration. Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that 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

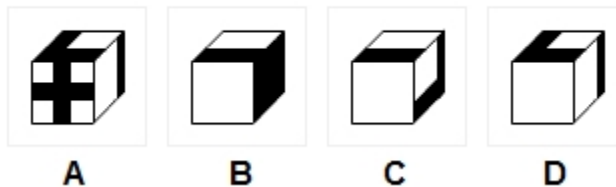
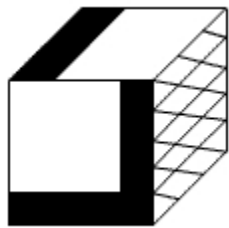
Remember that only three faces of a cube can be shown in an illustration. Although it is not usually specified in the instructions, it is almost always true that no two faces of the cube are identical unless explicitly shown to be so. The key to the correct answer is to consider the relationship that 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

Good Luck and Success in your next Job Aptitude Test by NNPC

For Other Companies Past Questions and Answer Visit www.jobgurus.com.ng/ebooks