Psychometric Questions

(With questions and answers)

What does this test contain?

1. Numerical - Six Numerical Reasoning questions
2. Verbal - Five Verbal reasoning questions (true/false/cannot say)
3. Non-verbal - Ten Inductive/Diagrammatic Reasoning

Numerical Reasoning

This test examines your ability to evaluate and interpret numerical data. In this test, you'll find graphs and tables containing data. You will be asked to answer questions related to each data set.

Each question has only one correct answer.

Please make sure you have a calculator, a pen and some paper.

Work as quickly and as accurately as you can.

The test consists of 6 questions.

Job Prospects for University Graduates

Type of University	1990		2000	
	Unemployed	Employed	Unemployed	Employed
Private	155	1475	125	1350
State	125	1610	150	1250

1. How many more employed were there in 1990 than in 2000?

    A. 75
    B. 360
    C. 485
    D. 100
    E. 135

Explanation

The number of employed in 2000 = Private + State = 1250 + 1350 = 2600.

The number of employed in 1990 = Private + State = 1475 + 1610 = 3085

The difference in the number of employed in 1990 and 2000 = 3085 -2600 = 485.

The answer is **A- 485**

Job Prospects for University Graduates

Type of University	1990		2000	
	Unemployed	Employed	Unemployed	Employed
Private	155	1475	125	1350
State	125	1610	150	1250

2. What percentage of students was unemployed in 1990?

    A. 10.5%
    B. 0.8%
    C. 7.8%
    D. 8.3%
    E. 9.6%

Explanation

The total number of students in 1990 = 155 + 125 + 1475 +1610 = 3365

The total number of unemployed in 1990 = 155 + 125 = 280

The percentage of students unemployed in 1990 = (280 / 3365) x 100 = 8.3%

The answer is **D- 8.3%**

Job Prospects for University Graduates

	1990		2000	
Type of University	Unemployed	Employed	Unemployed	Employed
Private	155	1475	125	1350
State	125	1610	150	1250

3. *What was the difference between the highest and lowest unemployment rate amongst the group of graduates?*

    A. 10.5%
    B. 7.8%
    C. 9.3%
    D. 4.2%
    E. 3.5%

Explanation

The unemployment rate for each group of graduates = (number of unemployed / total number of students) x 100

Unemployment rate for 1990 private university graduates = (155 / (155+1475)) x 100 = 9.5%

Unemployment rate for 1990 state university graduates = (125 / (125 + 1610)) x 100 = 7.2%

Unemployment rate for 2000 private university graduates = (125 / (125 + 1350)) x 100 = 8.5%

Unemployment rate for 2000 state university graduates = (150 / (150 + 1250)) x 100 = 10.7%

The difference between the highest unemployment rate (2000 state university) and the lowest unemployment rate (1990 state university) = 10.7-7.2 = 3.5%

The answer is **E- 3.5%**

Royal Air Services Passengers
(in thousands)
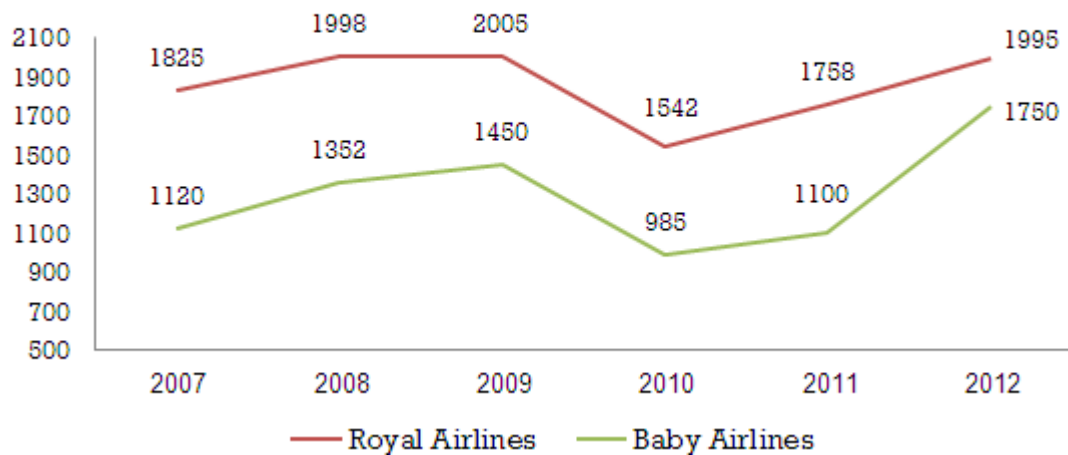
4. *Approximately what proportion of Royal Air Services passengers flew Royal Baby Airlines in 2010?*
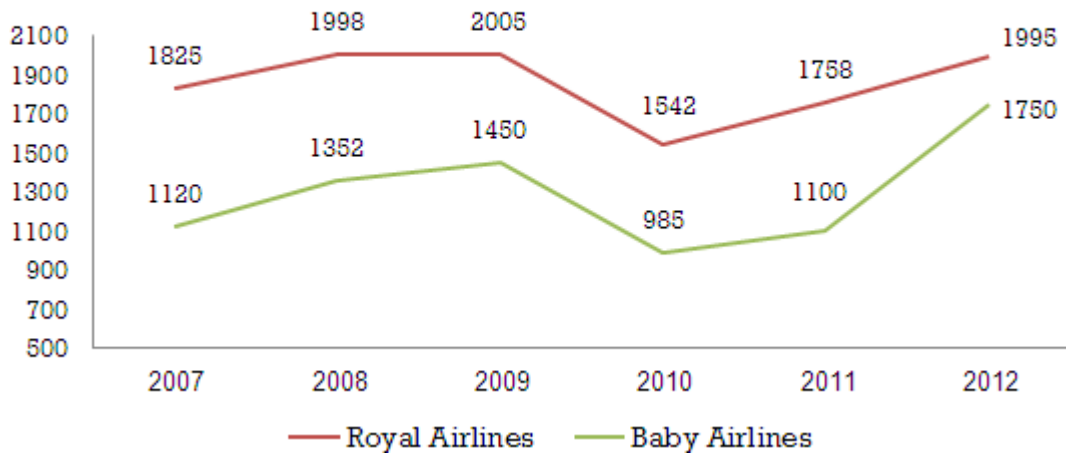
A. 25%
B. 30%
C. 35%
D. 40%
E. Cannot Say

Explanation

The total number of passengers travelling with Royal Air Services in 2010 was 1,542,000 + 985,000 = 2,527,000. For the sake of simplicity, you could omit the thousands from the calculation since the question asks for proportions rather than absolute numbers.

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 = (985 / 2527) = 38.98% which is approximately 40%.

The answer is **D- 40%**

Royal Air Services Passengers
(in thousands)

	1998	2005			1995

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2100 |
1900 |  1825                                                    1758      1995
1700 |                              1542                                   1750
1500 |        1352    1450
1300 |  1120                                        1100
1100 |                              985
 900 |
 700 |
 500 |
      2007    2008    2009    2010    2011    2012
```

── Royal Airlines   ── Baby Airlines

5. *In 2015, Royal Airlines and Royal Baby Airlines are each expected to sell 10% more than the number of tickets sold by Royal Airlines in 2009. 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 2015 for Royal Air Services?*

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

Explanation

In 2009, Royal Airlines sold 2005000 tickets.

The number of tickets each airline is expected to sell in 2015 is 2005000 x 1.1 = 2205500.

The combined revenues in 2015 from ticket sales is = (2205500 x 75) + (2205500 x 232) = 677088500 ≈ £677 million

The answer is **B- 677 million.**

Royal Air Services Passengers
(in thousands)

Royal Airlines — Baby Airlines
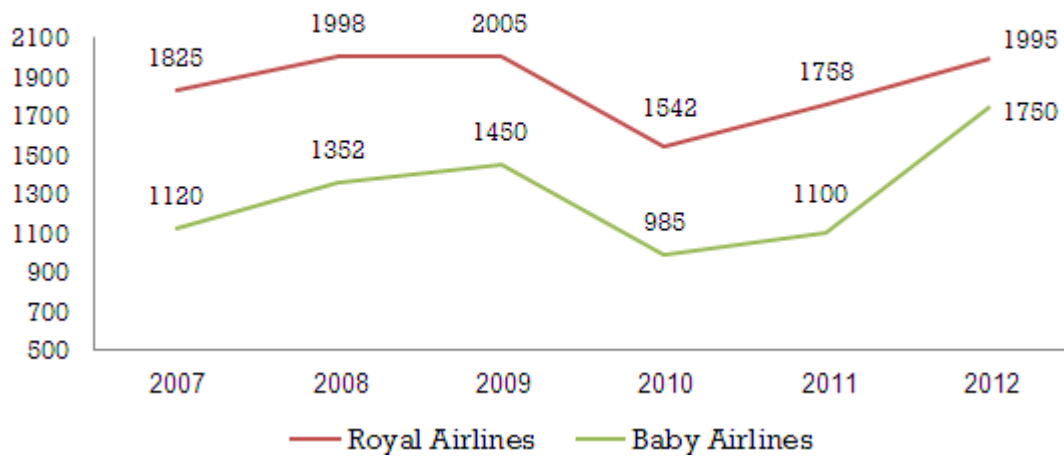
6. Approximately what proportion of overall ticket sales did Royal Baby Airlines account for in 2012?

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

Explanation

The number of tickets sold by Royal Baby Airlines in 2012 was 1750000.

The overall number of tickets sold by Royal Air Services in 2012 = 1750000 + 1995000 = 3745000.

The percentage of tickets sold by Royal Baby Airlines in 2012 was (1750000 / 3745000) x 100 = 46.73% ≈ 47%.

The answer is **E- 47%.**

Verbal Critical Reasoning

This test consists of 2 passages and five questions. Each text is followed by several statements

Read the passage and determine the correct answer:

- Choose **True** if the statement has to be true according to the passage.

- Choose **False** if statement has to be false according to the passage.

- Choose **Cannot say** if you cannot determine whether the statement is true or false without further information.

REMEMBER: you have to base your answers only on the information given in the text.

Passage 1:

In the past, home heating systems have been operated using different sources of energy such as wood, electricity, and kerosene. But these are expensive when compared to a more recently developed source - solar energy. Solar energy is an alternative, but its application for heating is limited to a small numbers of appliances. There is also the difficulty of obtaining solar energy for heating purposes in the winter time when it is most needed and its major resource, the sun, is hardly effective.

1. Solar energy is hardly available in the winter.

True

False

Cannot say

Explanation

According to the text the sun is hardly effective in the winter, which means that solar energy isn't really available in the winter.

The answer is True.

2. The use of solar energy for heating is restricted to a few heating devices.

True

False

Cannot say

Explanation

The text suggests that, "it (solar energy) can only be used for heating with a small number of appliances".

The answer is **True**.

3. There are other major resources that can be used to provide solar energy instead of the sun.

True

False

Cannot say

Explanation

According to the text, "… its major resource, the sun..." There are, therefore, no other **major** resources for solar energy.

The answer is **False**.

<u>Passage 2</u>:

It is now widely acknowledged that the movement against racism in Western European societies is gaining momentum. Openness to diversity and multicultural societies resulting from mass immigration have also contributed to reduce discrimination suffered by minority groups. Unfortunately racial discrimination remains prevalent. Racial discrimination can create anarchy and damage the delicate fabric of society which can undermine a nation's resilience.

4. Mass immigration leading to multicultural societies has contributed to increased racism in Western Europe.

True

False

Cannot say

Explanation

The text clearly states that, "multicultural societies resulting from mass immigration have contributed to a reduction in discrimination suffered by minority groups."

The answer is **False**.

5. Societies that do not fight against racial discrimination may suffer in the future.

True

False

Cannot say

Explanation

The text states that societies may suffer from "anarchy" and damage their "delicate fabric of society" due to racial discrimination.

The answer is **True.**

Inductive/Diagrammatic Reasoning

Each question consists of a series of diagrams in a logical sequence.

You are to choose the next diagramme in the series from the five options presented.

Please select one correct answer.

The test consists of 10 questions.

A.
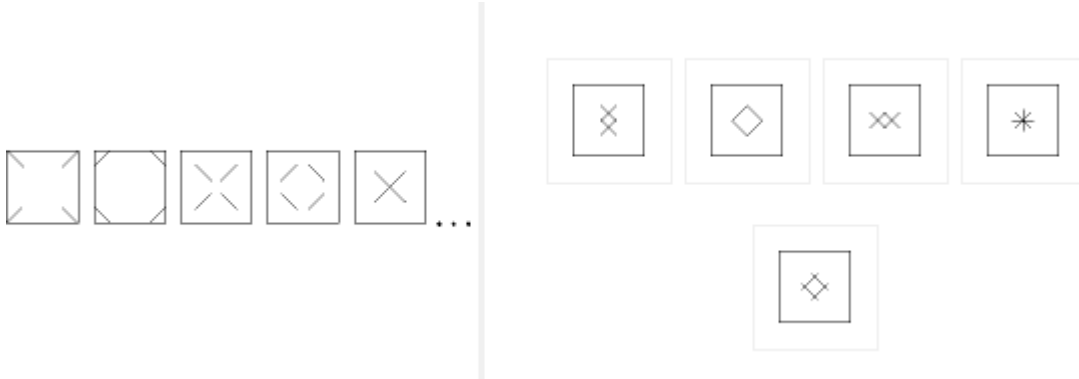
Explanation

In this series the 1st, 3rd and 5th object consist of a square that has 4 lines moving towards each other creating eventually an X. In the 2nd and 4th square the lines are moving towards each other as well, expected to form a diamond in the 6th missing object.

The answer is -

The 5th option is not correct since, as the X show us, the lines do not overlap.

B.
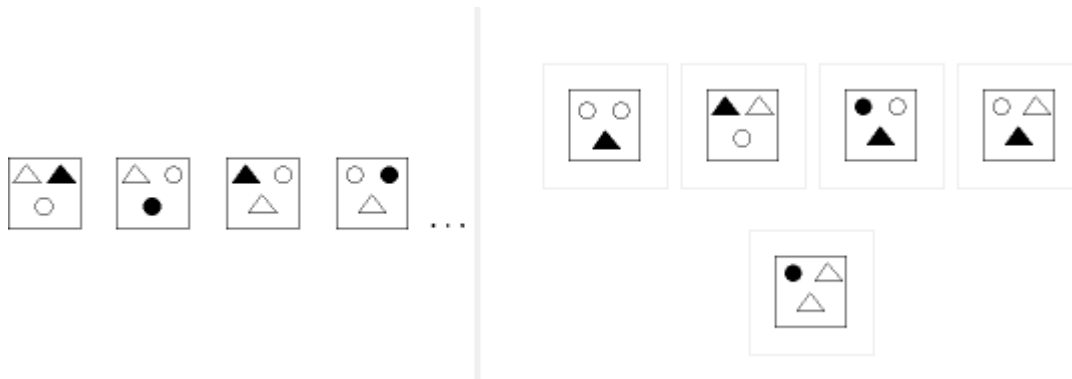
Explanation

Each of the objects in the series consists of triangles and circles. Each object has either 1 triangle and 2 circles or 2 triangles and 1 circle – and these alternate. In addition whenever there are 2 triangles or circles in an object one of them is black and the other white. Since the 4th object consists of 2 circles and a triangle the missing object in the series should consist of 2 triangles (one black and one white) and a circle (options 2 and 4 only). Further, the black shape in each object moves in clockwise direction between objects therefore the black triangle in the missing object should be in the bottom spot.

The answer is -

C.
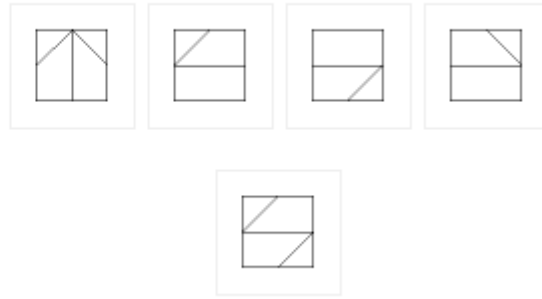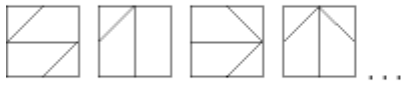
Explanation

The series consists of squares with three lines in them – one straight line and two diagonals. The diagonal at the top in the first object moves in clockwise direction every other object, the straight line flips between horizontal and vertical positions and the second diagonal flips between opposite corners – the bottom right and the top left hand corner. In the missing object the two diagonals coincide.

The answer is -

D.
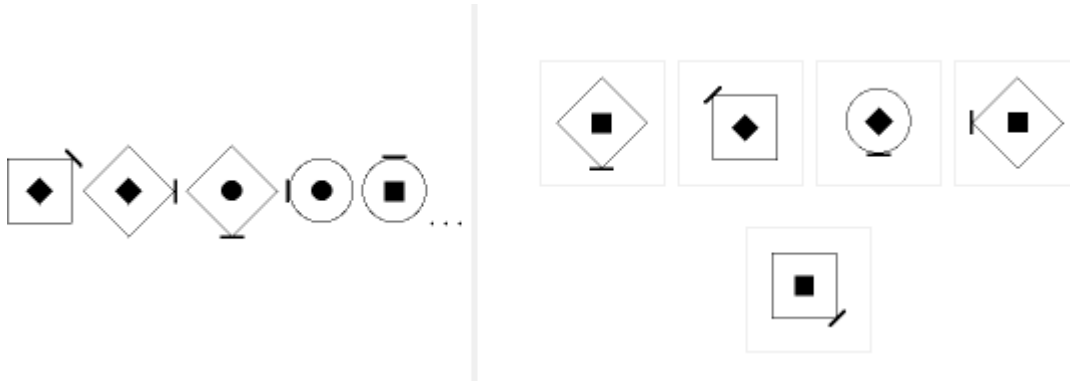
Explanation

This series consists of three geometric shapes – a circle, a diamond and a square. Each of the shapes appears twice in a row. Within each of these shapes a smaller black geometric shape appears – a diamond, a circle and a square and these to, appear twice in a row. We can already determine that the missing object should be a square with a black square in it – only one answer option matches this criteria (so we do not need to work out the movement of the small line on the outside as well in order to determine the answer).

The answer is -

E.
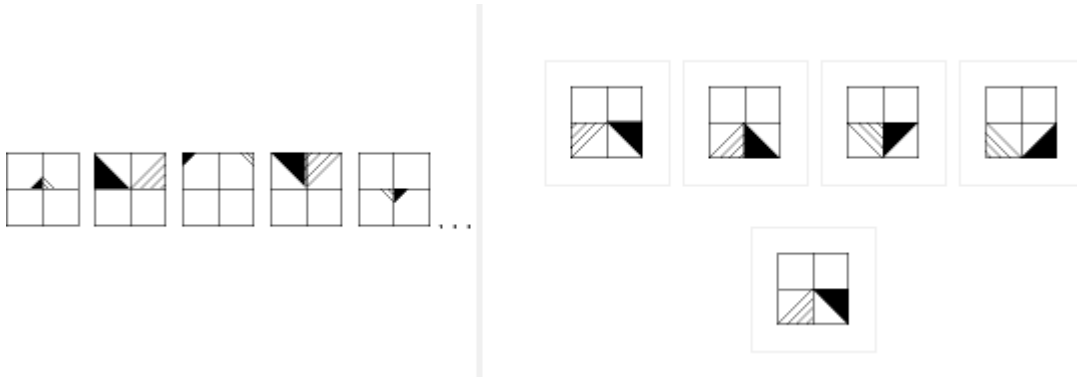
Explanation

The series consists of squares divided into a grid of 4 squares. In the top left hand square there is a black triangle that moves between the corners clockwise and upon doing so increases and decreases in size alternately. In the top right hand square a line-patterned triangle moves between the corners anti-clockwise and similarly changes size. Upon completing a full cycle (i.e. each triangle has moved between all four corners of a square) the triangles move to the two bottom squares and each triangle maintains the direction of movement (i.e. black triangle clockwise and line-patterned triangle anti-clockwise).

The answer is -
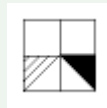
F.

G.

Explanation

The series consists of objects that have a short and long line in them resembling a clock. Each of the lines moves 90 degrees clockwise every other object and they alternate between them. So, when the short line moves the long one doesn't and vice versa. In the missing object the short line should move 90 degrees clockwise and the long line should remain as is.

The answer is -

H.
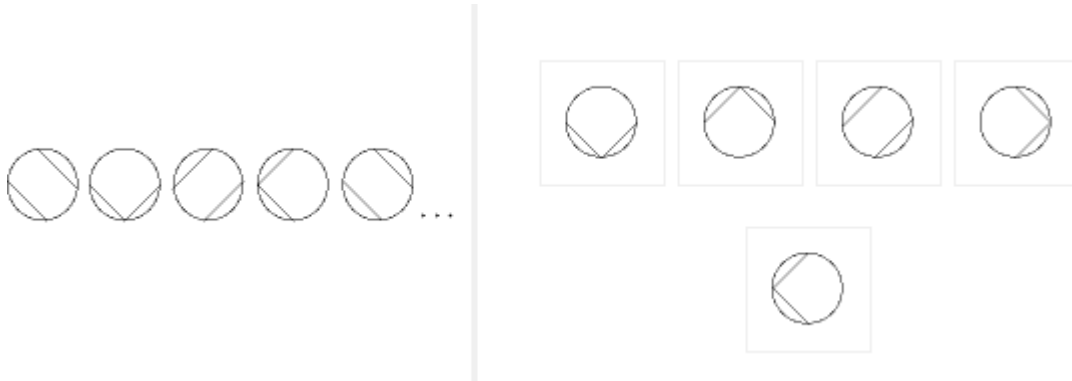
Explanation

This series consists of two types of diagrams. The first is a circle with two parallel lines inside it, and the second is a circle with two lines that form a 90 degree angle. These two types of diagrams alternate. This means that the next diagram in the series should be a circle with two lines in it, forming a 90 degrees angle. The two lines forming the 90 degree angle move in a clockwise direction (90 degrees each time).

The answer is -

I.
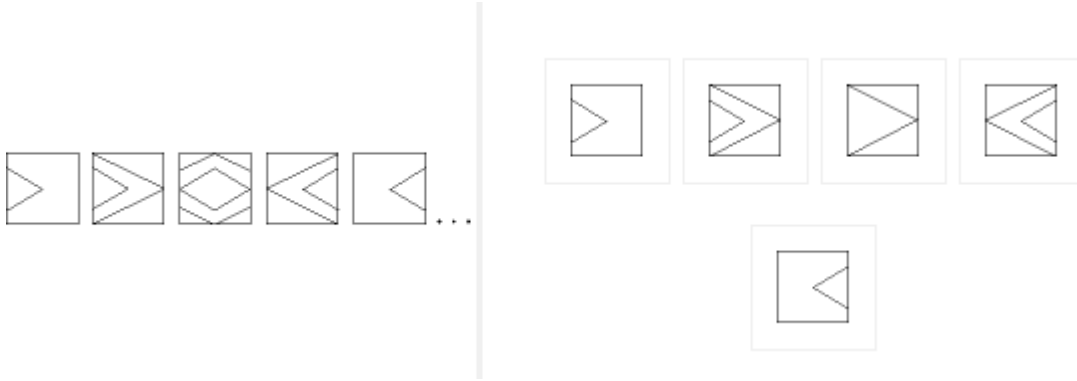
Explanation

Imagine a series of shapes moving from left to right through a square window. Each object reveals an additional part of the shape whilst another part which has moved across the window disappears. Following this logic the next shape to appear in the window should either be blank or a tip emerging from the left – which is the only available option.

The answer is -
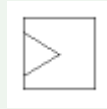
J.
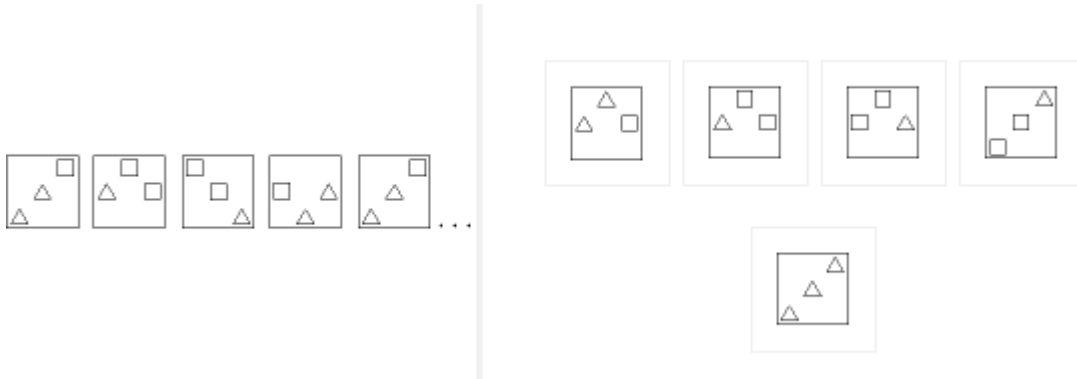
Explanation

Imagine that the objects in the first square move one step to the left and a new object enters from the right. In the missing diagram, the triangle on the bottom left-hand side of the 5th diagram should move out and the triangle and the square behind it should move one step to the left. An additional shape (unknown) should enter from the right.

The answer is -