

# PiAcademy

## 11+ Mathematics GL Style - Pack 3 Test Paper - 9

### Instructions:

1. The time allowed is 50 minutes for 50 questions
2. This is a multiple-choice test and each question carries 1 Mark.
3. Answers should be clearly marked in pencil on the provided answer sheet.
4. Do not turn over the booklet until you are told to do so.
5. No Marks are lost for an incorrect answer.
6. If you have marked the wrong answer, erase it and mark the new one. Make sure that your final answer is clear.

Symbols used:



Go to the next page.



Do not turn the page until told to do so.



Stop working and await instructions.

[piacademy.co.uk](http://piacademy.co.uk)



1 Which weighs about 100 g?

- [A] A laptop      [B] A piece of paper      [C] A television      [D] A badminton racket  
[E] A feather

2 What is the difference between the product of 12 and 7 and the sum of 12 and 7?

- [A] 60      [B] 65      [C] 71      [D] 61      [E] 75

3 Put brackets into the following sum to make it correct.

$$2 \times 4 + 60 \div 4 - 8 \times 2 = 16$$

- [A]  $2 \times 4 + 60 \div (4 - 8) \times 2 = 16$       [B]  $(2 \times 4 + 60) \div 4 - 8 \times 2 = 16$   
[C]  $2 \times 4 + 60 \div (4 - 8 \times 2) = 16$       [D]  $2 \times (4 + 60) \div 4 - 8 \times 2 = 16$   
[E]  $2 \times (4 + 60 \div 4) - 8 \times 2 = 16$

4 What is the smallest number that is exactly divisible by 4, 8 and 10?

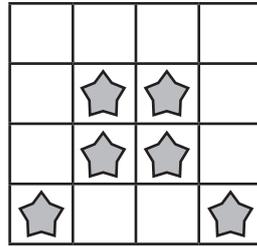
- [A] 36      [B] 40      [C] 35      [D] 10      [E] 18

**GO ON TO THE NEXT PAGE**



5

One more star is placed at random in one of the empty squares on the grid.  
What is the probability that it will complete a line of 4 stars?



- [A]  $\frac{1}{2}$       [B]  $\frac{1}{3}$       [C]  $\frac{1}{5}$       [D]  $\frac{7}{10}$       [E]  $\frac{2}{5}$

6

Zara started at 10 and counted up in steps of  $3\frac{1}{2}$ . Which of these numbers did she count?

- [A] 17      [B] 16      [C] 20      [D] 18      [E] 28

7

A sequence starts at 600 and 90 is subtracted each time.

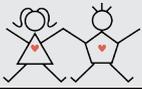
600 510 420 .....

The sequence continues in the same way.

What is the first number in the sequence that is less than zero?

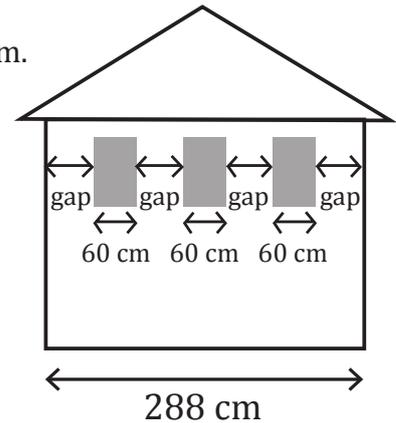
- [A] -20      [B] -30      [C] -60  
[D] -40      [E] -50

**GO ON TO THE NEXT PAGE**



8

This house has three equally spaced windows.  
Each window is 60 cm wide. The length of the house is 288 cm.



Calculate the length of one gap between two windows

- [A] 64 cm    [B] 27 cm    [C] 108 cm    [D] 44 cm    [E] 54 cm

9

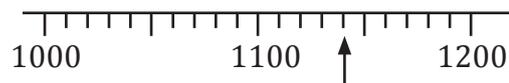
Find the missing digit.

$$\begin{array}{r} 4 \quad 5 \\ x \quad \square \\ \hline 3 \quad 6 \quad 0 \\ \hline \end{array}$$

- [A] 7    [B] 6    [C] 8    [D] 10    [E] 4

10

Write down the number marked by the arrow on the number line below.



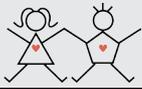
- [A] 1105    [B] 1150    [C] 1130    [D] 1140    [E] 1145

11

Hannah eats a chocolate every 12 minutes. Joseph eats a chocolate every 30 minutes. Both Hannah and Joseph eat a chocolate at 12:20. When do they next both eat at the same time?

- [A] 1:30    [B] 1:20    [C] 2:20    [D] 12:30    [E] 12:60

**GO ON TO THE NEXT PAGE**



12

A cuboidal box is 8m long and 6m high. It has a capacity of  $192 m^3$ .  
What is the width of the box?

- [A] 12 m      [B] 4 m      [C] 10 m      [D] 18 m      [E] 5 m

13

A showroom sells watches. It offers a discount of 20% off the normal price for cash.  
David pays £220 cash for a watch. Calculate the normal price of the watch.

- [A] £300      [B] £275      [C] £350      [D] £400      [E] £320

14

Calculate the following, giving the answer as a mixed number in its simplest form.

$$7\frac{1}{8} - 5\frac{1}{4}$$

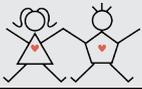
- [A]  $\frac{15}{8}$       [B]  $1\frac{3}{8}$       [C]  $1\frac{7}{8}$       [D]  $2\frac{5}{8}$       [E]  $1\frac{1}{8}$

15

Large packets of milk can hold 500 ml and small packets can hold 280 ml. For making milkshakes Katie used two small packets and one large packet. For making pudding she used two large packets. Her friend Jack drank exactly three-quarters of the amount that Katie used in total. How much did Jack drink?

- [A] 1155 ml      [B] 1345 ml      [C] 1545 ml  
[D] 1500 ml      [E] 1250 ml

**GO ON TO THE NEXT PAGE**



16

Write three prime numbers which multiply to make 286.

- [A] 5, 7, 13    [B] 3, 11, 13    [C] 2, 3, 7    [D] 2, 11, 17    [E] 11, 13, 2

17

How long will it take a sloth to move 12 metres at 50 mm/sec?

- [A] 1200 seconds                      [B] 40 minutes                      [C] 240 minutes  
[D] 60 minutes                      [E] 4 minutes

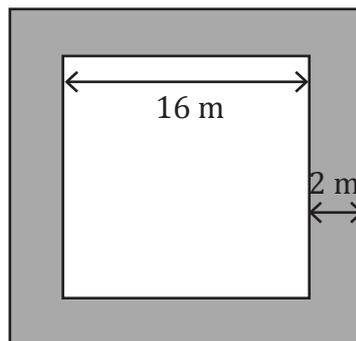
18

If Gwen buys 60 litres of diesel at 45p per litre, how much change will she get from £50?

- [A] £23    [B] £25    [C] £22.50    [D] £31    [E] £20.50

19

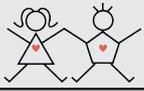
The figure shows a 16-metre by 16-metre house surrounded by a fence 2 metres wide.



What is the difference between the outer perimeter and inner perimeter of the fence?

- [A] 24 m    [B] 16 m    [C] 12 m    [D] 20 m    [E] 18 m

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20

This function machine divides by 6 and then adds 13 to the result.

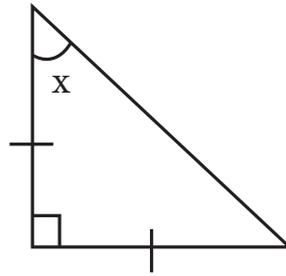


Which number comes out?

- [A] 36      [B] 40      [C] 35      [D] 25      [E] 31

21

Look at the right - angled isosceles triangle below. Write down the value of x.



- [A]  $60^\circ$       [B]  $90^\circ$       [C]  $45^\circ$       [D]  $120^\circ$       [E]  $55^\circ$

22

I am thinking of a three digit number that is a multiple of both 8 and fourteen.

The digits add up to 15.

What number am I thinking of?

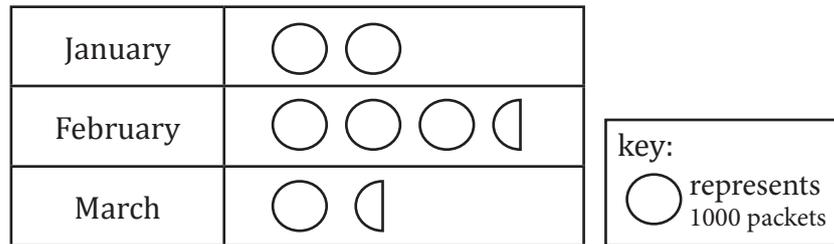
- [A] 654      [B] 168      [C] 159      [D] 384      [E] 276

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23

The pictogram shows the number of packs of erasers sold in a shop in January, February and March of 2020.



How many more erasers were sold in February than March?

- [A] 500      [B] 1500      [C] 2000      [D] 1000      [E] 700

24

Here are the ingredients needed to make 15 cupcakes.

240 g flour

100 g sugar

80 g butter

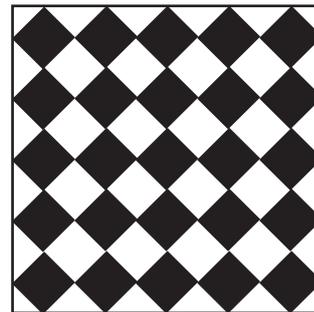
60 g chocolate chips

Louis wants to make 24 cupcakes. Work out how much butter he needs.

- [A] 128 g                      [B] 132 g                      [C] 100 g
- [D] 160 g                      [E] 148 g

25

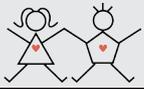
Here is a pattern on a window.



What fraction of the window is shaded?

- [A]  $\frac{2}{3}$       [B]  $\frac{1}{2}$       [C]  $\frac{2}{5}$       [D]  $\frac{1}{3}$       [E]  $\frac{13}{25}$

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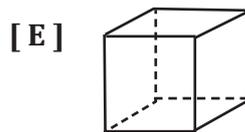
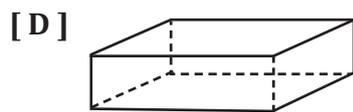
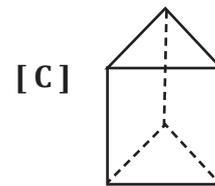
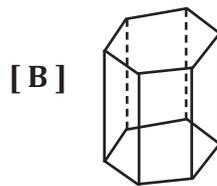
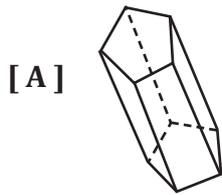
26

Which of these five numbers has exactly one line of symmetry?

- [A] 3      [B] 4      [C] 2      [D] 8      [E] 0

27

Look at the diagrams showing 3-D shapes. Which of these shapes has three rectangular faces and two triangular faces?



28

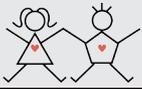
The temperatures recorded in London and Preston were:

London	Preston
-5°C	-13°C

What is the difference between these two temperatures?

- [A] 8°C      [B] -9°C      [C] -7°C      [D] -8°C      [E] 6°C

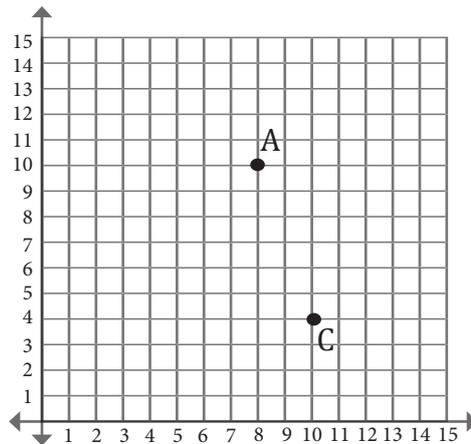
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29

A, B, C and D are the vertices of a rectangle.

A and C are shown on the grid.



D is the point (6, 8). Write the coordinates of point B.

- [A] (7, 6)    [B] (8, 4)    [C] (12, 6)    [D] (12, 4)    [E] (12, 8)

30

Harry threw 2.75 m on his second try at javelin throw.

This was 85 cm more than his first try.

How far in metres did he throw on his first try?

- [A] 190 cm    [B] 1.5 m    [C] 2 m    [D] 1.6 m    [E] 1.9 m

31

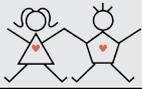
The table shows the amount of rainfall for a week in Liverpool.

Day	Rainfall (in cm)
Monday	90
Tuesday	80
Wednesday	100
Thursday	125
Friday	105
Saturday	100

What was the mean amount of rainfall(in cm) in Liverpool this week?

- [A] 150    [B] 100    [C] 175    [D] 180    [E] 125

**GO ON TO THE NEXT PAGE**



32

What is this number to two decimal places?

3.2483461

- [A] 3.24      [B] 3.25      [C] 3.26      [D] 3.20      [E] 3.22

33

If 15<sup>th</sup> June is Tuesday, what will be the day on August 1<sup>st</sup>?

- [A] Monday                      [B] Tuesday                      [C] Wednesday  
[D] Saturday                      [E] Sunday

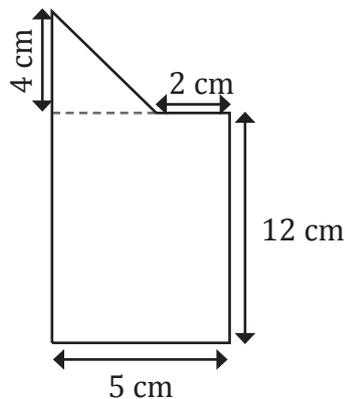
34

The pointer turns 135° clockwise from South. In which direction does the pointer point?

- [A] North                      [B] West                      [C] North - West  
[D] North - East                      [E] South - West

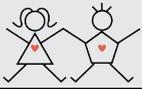
35

What is the area of this shape?



- [A] 68 cm<sup>2</sup>      [B] 64 cm<sup>2</sup>      [C] 62 cm<sup>2</sup>      [D] 66 cm<sup>2</sup>      [E] 70 cm<sup>2</sup>

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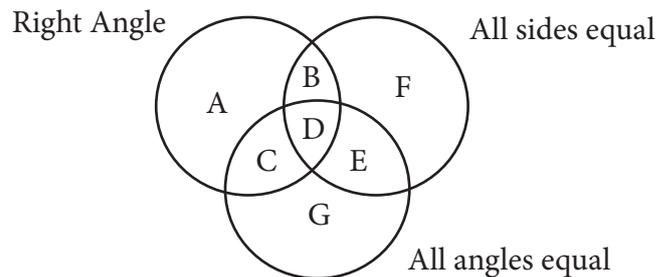
36

There are 3 defective dolls in every 100 dolls a factory makes. If the factory makes 60000 dolls, how many of them are not defective?

- [A] 18000    [B] 1800    [C] 58200    [D] 42000    [E] 36000

37

Look at the Venn diagram. Which of the following regions would have an equilateral triangle in it?



- [A] F    [B] G    [C] A    [D] E    [E] B

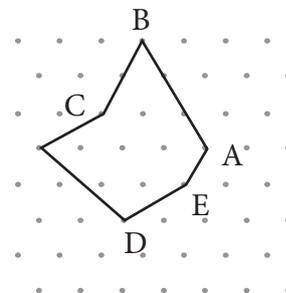
38

A packet contains 2.7 kg of dog food.  
Ryan feeds his dog 30 g of food each day.  
How many days does the packet of food last?

- [A] 900 days    [B] 90 days    [C] 60 days    [D] 600 days    [E] 50 days

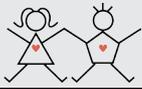
39

This shape is drawn on a triangle dotted paper.  
One of the angles is  $60^\circ$ . Which one is it?

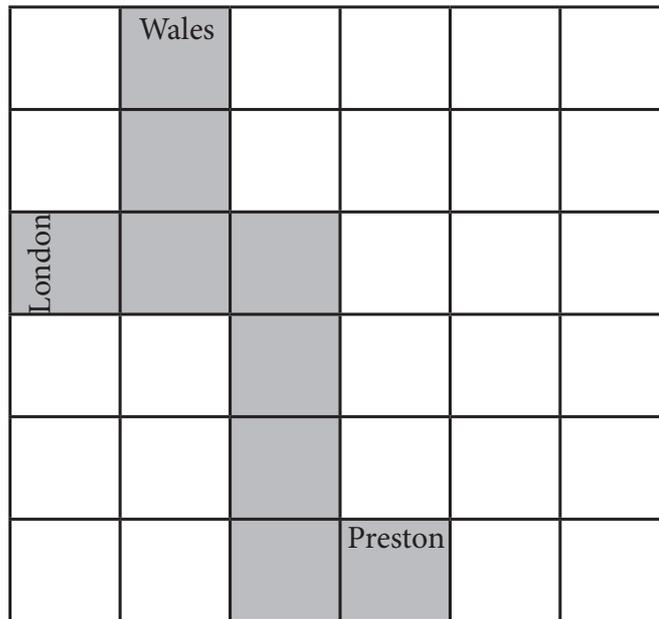


- [A] B    [B] D    [C] E    [D] A    [E] C

**GO ON TO THE NEXT PAGE**



Samantha wants to go to Preston from London on the given map. The rule is she can only MOVE FORWARD, TURN RIGHT  $90^\circ$  and TURN LEFT  $90^\circ$ .



Guide Samantha by giving her instructions that will help her reach Preston.

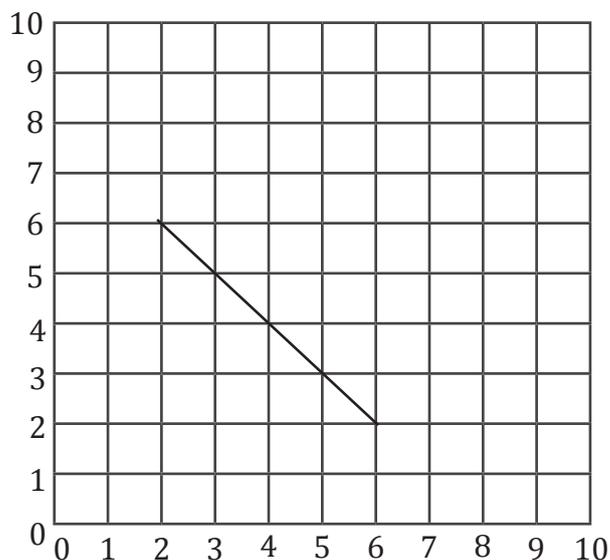
- [ A ] MOVE FORWARD 2, TURN LEFT  $90^\circ$ ,  
MOVE FORWARD 3, TURN RIGHT  $90^\circ$ ,  
MOVE FORWARD 1
- [ B ] MOVE FORWARD 2, TURN RIGHT  $90^\circ$ ,  
MOVE FORWARD 3, TURN LEFT  $90^\circ$ ,  
MOVE FORWARD 2
- [ C ] MOVE FORWARD 2, TURN RIGHT  $90^\circ$ ,  
MOVE FORWARD 2
- [ D ] MOVE FORWARD 2, TURN RIGHT  $90^\circ$ ,  
MOVE FORWARD 3, TURN LEFT  $90^\circ$ ,  
MOVE FORWARD 1
- [ E ] MOVE FORWARD 2, TURN RIGHT  $90^\circ$ ,  
MOVE FORWARD 2

**GO ON TO THE NEXT PAGE**



41

The endpoints of five lines are given below.  
Which line is parallel to the line in the diagram?



- [A] (5,7) and (4,6)      [B] (5,8) and (7,10)      [C] (8,7) and (8,2)  
[D] (3,7) and (7,3)      [E] (1,3) and (5,3)

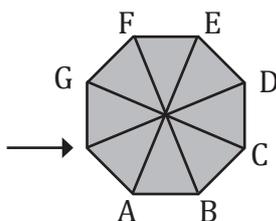
42

The sum of three consecutive square numbers is 50. What is the sum of the next two consecutive square numbers?

- [A] 50      [B] 85      [C] 113      [D] 181      [E] 221

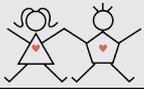
43

The octagon is divided into 8 equal sectors. It is rotated  $270^\circ$  clockwise about its centre.  
Which point on the octagon will the arrow point to?



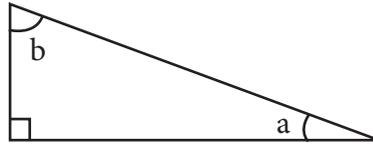
- [A] D      [B] F      [C] B      [D] C      [E] G

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44

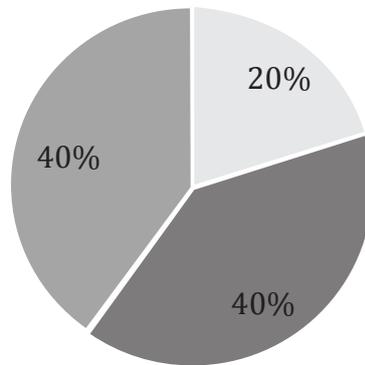
Look at the triangle. Angle a is  $25^\circ$ . Calculate the size of angle b.



- [A]  $25^\circ$       [B]  $35^\circ$       [C]  $45^\circ$       [D]  $55^\circ$       [E]  $65^\circ$

45

This pie chart shows the favourite flowers of children in a group.



- Lily      ● Rose      ● Jasmine

If 30 children like lilies, how many children like roses?

- [A] 30      [B] 60      [C] 90      [D] 120      [E] 40

46

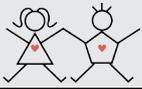
A box contains 260 chocolates and weighs 3100 grams.

The empty box weighs 1800 grams.

Calculate the weight of one chocolate.

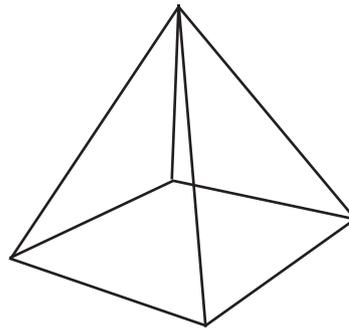
- [A] 0.05 g      [B] 5 g      [C] 0.5 g      [D] 0.005 g      [E] 50 g

**GO ON TO THE NEXT PAGE**

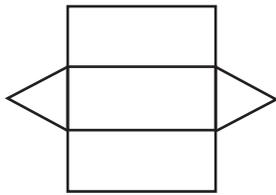


47

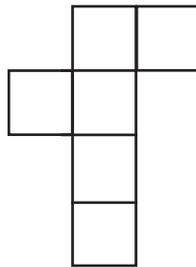
Which one is the net for Square Pyramid?



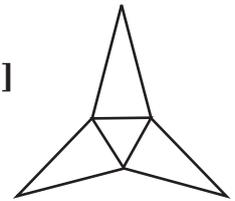
[A]



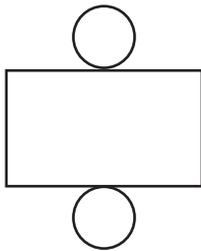
[B]



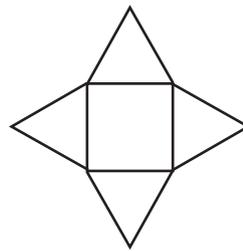
[C]



[D]



[E]

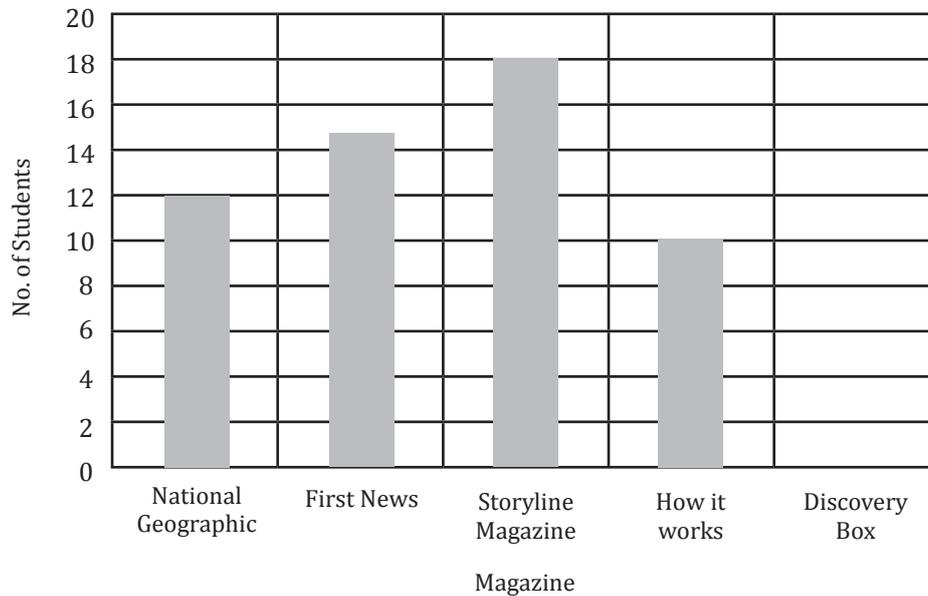


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48

Wayne collected information about his schoolmates' favourite magazine. He used this information to draw the given bar chart.



If he surveyed a total of 63 students, how many students like Discovery Box?

- [A] 45      [B] 12      [C] 15      [D] 8      [E] 6

49

Hannah, Kesha and John collect money for their picnic.

Hannah collects £5.75 more than John.

Kesha collects £25.

John collects £9 less than Kesha.

Altogether how much money do the three kids collect for their picnic?

- [A] £56.75    [B] £62.75    [C] £62.25    [D] £63      [E] £64

50

If it is given that  $361 \times 56 = 20216$ , find the value of  $202.16 \div 5.6$ .

- [A] 36.1      [B] 361      [C] 3.61      [D] 36100    [E] 3610

**END OF THE TEST**

11+ Maths - GL Style (Pack 3) - Test Paper 9  
ANSWER MARKING SHEET



Name: \_\_\_\_\_

Date: \_\_\_\_\_

School Name: \_\_\_\_\_

Please mark boxes with a thin horizontal line like this .

50 numbered boxes for marking answers. Each box contains a vertical list of options A, B, C, D, and E, each with a small empty box to its right for marking.

**For Parents use only**

Marks Scored: ..... Time taken: .....

Comments: .....

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