FOBISIA PMC 2026	
Individual Written Round Questions	FOBISIA ESTABLISHED IN 1988 Primary Maths Challenge 2026

Instructions

This test has a total of 39 questions worth 1 mark each

There is no penalty for incorrect answers

You must write your final answer clearly on the answer sheet. Do not write your answers on this paper.

Only one answer should be given.

You can complete the questions in any order

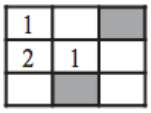
Time: You have 1 hour to complete the test.

1.) Which of the following could have a capacity of 10 litres?

A. an aeroplane B. a bucket C. a cup

d.) a dustpan e.) an egg

2.) Sophie wants to complete the grid shown so that each row and each column of the grid contains the digits 1, 2 and 3 exactly once.



What is the sum of the digits she will write in the shaded cells?

3.) Skye has half as many pens as Ishaa. Ana has twice as many pens as Skye.
What fraction of all their pens does Skye have?

4.) Which number replaces the question mark below?

100 – 2

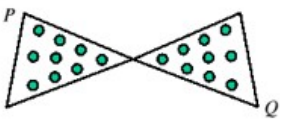
71 + 5

54 x 1

31 + 1

2 x ?

5.) A ladybird has landed at point P on Sam's bow tie. If it travels only along the edges of the bow tie, but cannot travel along any edge more than once, how many different ways are there for it to get from P to Q?



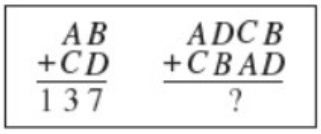
6.) At the end of a hard day at the mine, the seven dwarves share out all their gold nuggets, making sure that they each get the same number of nuggets. If there are any left over, they are given to Snow White. For which number of nuggets listed below would Snow White get the most to herself?

A. 300 B 400 C. 500 D. 600
E .700

7.) Give 2 numbers lower than 100 that have an odd number of factors.

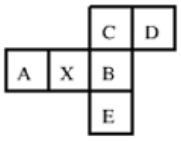
8.) In Fred's field there are some humans and some horses.
There are 25 heads in total and 60 legs in total.
What is the difference between the number of humans and the number of horses?

9.) A student correctly added the two two-digit numbers on the left of the board and got the answer 137.

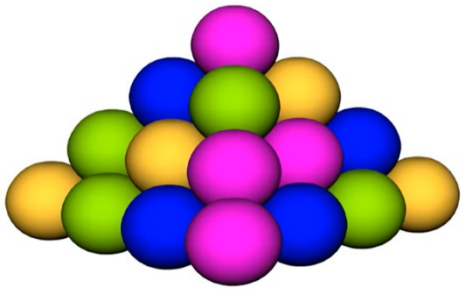


What answer will he obtain if he adds the two four-digit numbers on the right of the board?

10. If the net shown is folded to make a cube, which letter is opposite ?



11.) How many balls are there?



12.) I saw the following numbers on cars on the way to school. Each number, with one exception, has the same remainder when divided by 9.

Which is the exception?

a.) 113 b.) 257 c.) 554 d.) 725 e.) 861

13.) Which regular polygons can tessellate?

14. Zara has a collection of 4 marbles: an Aggie, a Bumblebee, a Steelie, and a Tiger. She wants to display them in a row on a shelf, but does not want to put the Steelie and the Tiger next to one another. In how many ways can she do this?

15.) The 7-digit numbers and are each multiples of . Which of the following could be the value of ?

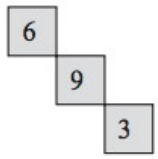
A .1 B. 2 C. 3 D. 5 E. 8

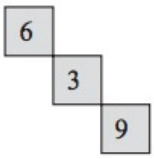
16.)

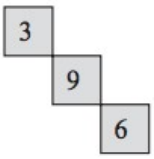
In a magic square, the numbers in each row, each column and the two main diagonals have the same total. This magic square uses the integers 2 to 10.

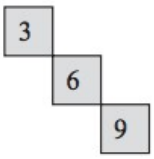
	10	5
8		4
7	2	

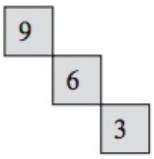
Which of the following are the missing cells?

A 

B 

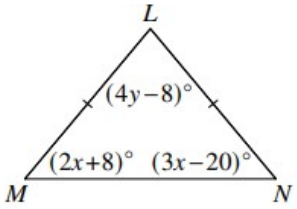
C 

D 

E 

17.)

Triangle is isosceles with = .
What is the value of ?



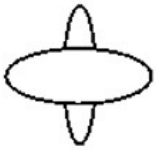
18.)

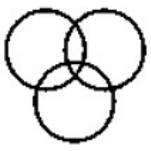
Which of these diagrams could be drawn without taking the pen off the page and without drawing along a line already drawn?

A

B

C

D 

E 

19.) There are two ponds at the bottom of Gabrielle’s garden, each containing some frogs and toads. In one pond the ratio of frogs to toads is 3 : 4.

In the other pond the ratio of frogs to toads is 5 : 6.

Suppose there are 36 frogs in total.

What then would be the largest possible total number of toads in the ponds?

20.) I bought a cow for $800.

I sold it for $1000.

I bought it again for $1100

I sold it again for $1300.

How much money did I make?

21.) What is ?

22.) What is the value of ?

23.) A father has 49 gold coins. The 1st coin weighs 1g; the 2nd coin weighs 2g; and so on, with the 49th coin weighing 49g.

He wants to give 7 coins to each of 7 sons so that every son gets coins of the same total weight. How many g of gold does each son get?

24.) Amrit and his grandad share the same birthday. Their birthday balloons arrive muddled up (not in the correct order). Amrit’s grandad is three times older than him. How old is Amrit?

25.) Mike drank 70% of his glass of milk. Afterwards, 120ml of milk remained in the glass. What volume of milk was initially in the glass?

26.) There are six more girls than boys in Miss Singh’s class of 24 pupils. What is the ratio of girls to boys in this class?

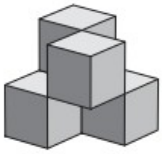
Give your answer as a ratio in simplest form. If a ratio is not in simplest form, no marks will be awarded for this question.

27.) What is the value of ?

28.) The sum of three numbers is 2026. The sum of the first two numbers is 977 and the sum of the last two is 1049. What is the product of all three numbers?

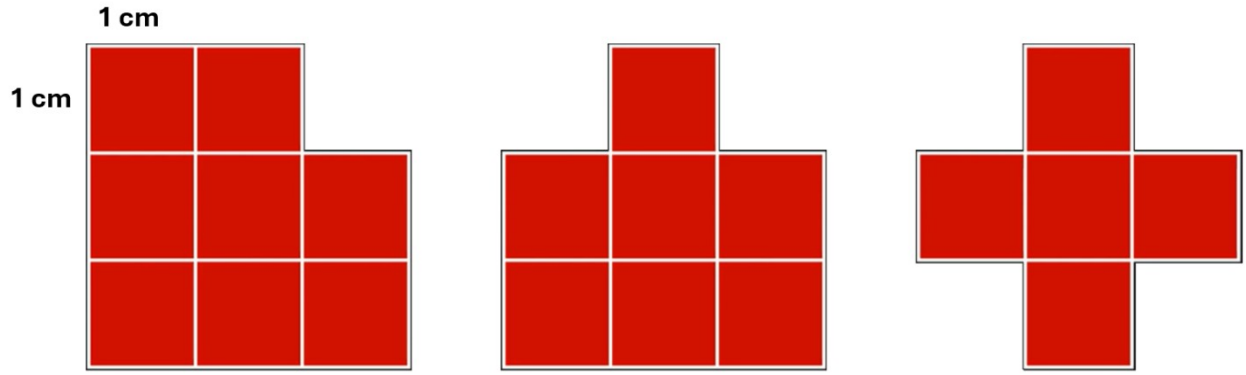
29.) A watch was set at the correct time at noon on Thursday. At 6 p.m. on the next day, it was 36 minutes fast. At that rate, how many seconds will it gain in half an hour?

30.) The diagram shows a shape made from four 3 cm × 3 cm × 3 cm wooden cubes joined by their edges.



What, in cm^2, is the surface area of the shape?

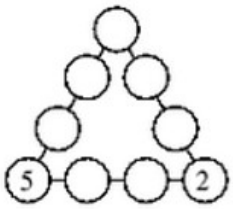
31.) The figure below shows a solid object made by stacking several cubes with side lengths of 1cm as viewed from the front, the side and above. What is the volume of the shape?



32.) For how many three-digit positive integers does the product of the digits equal 24?

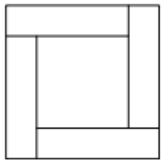
33.) Granny gave away her entire collection of antique spoons to three people. Her daughter received 8 more than a third of the total; her son received 8 more than a third of what was then left; finally, her neighbour received 8 more than a third of what was then left.
What is the sum of the digits of the number of spoons which were in Granny’s collection?

34.) Sam wants to complete the diagram so that each of the nine circles contains one of the digits from 1 to 9 inclusive and each contains a different digit. Also, the digits in each of the three lines of four circles must have the same total. What is this total?

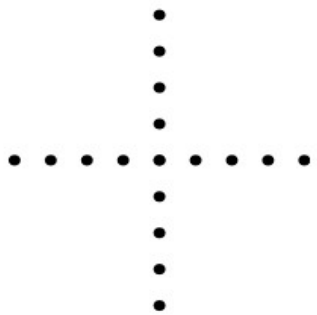


35.) Four congruent rectangles are arranged as shown to form an inner square of area 6.7 cm² and an outer square of area 64 cm².
What is the perimeter of one of the four congruent rectangles?

(Note: The diagram below is not to scale.)

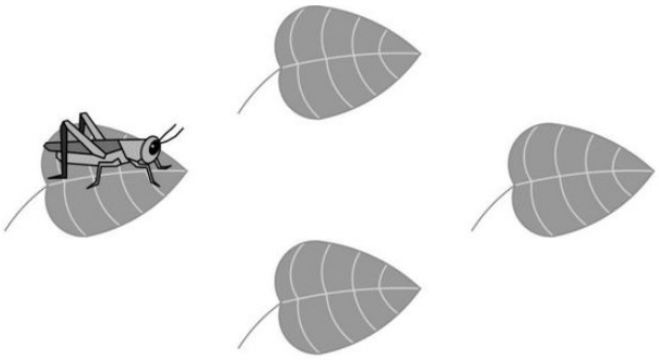


36.) How many triangles (with non-zero area) are there with each of the three vertices at one of the dots in the diagram?



37.) A cricket randomly hops between 4 leaves, on each turn hopping to one of the other 3 leaves with equal probability. After 6 hops what is the probability that the cricket has returned to the leaf where it started?

Give your answer as an exact fraction in simplest form. If a fraction is not exact or not in simplest form, no marks will be awarded for this question.



38.) If you list all the numbers from 1 to 100 in order, 100 would be the 100th number but what would be the 100th digit?

39.) In a room of 100 people, 99% are left-handed. How many left-handed people have to leave the room to bring that percentage down to 98%?

[End of round]