

FIRST MATHEMATICS CHALLENGE 2024



NAME CLASS

For each question, write down **A B C D** or **E** in the box next to each answer.

Practice 1

How many sides does this shape have?



A 4

B 5

C 6

D 7

E 8

B

Practice 2

I am thinking of a number, When I add ten to it, the answer is 16.
What is the number I am thinking of?

A 6

B 7

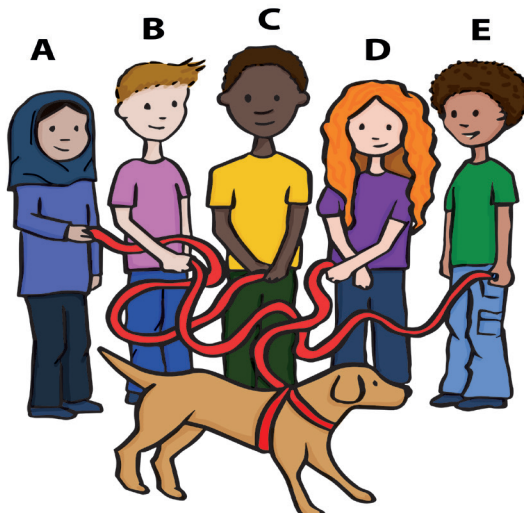
C 8

D 9

E 10

Practice 3

Who is holding the dog's lead?



A A

B B

C C

D D

E E

MATHEMATICAL ASSOCIATION



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TOTAL MARKS

/20

FIRST MATHEMATICS CHALLENGE

1. Two numbers, when added together, give 9 and when multiplied together give 20. What are these numbers?

A 1 and 8 **B** 2 and 7 **C** 3 and 3 **D** 3 and 6 **E** 4 and 5

2. Snail Pace can walk 3km in one hour. Her walk around the park is 6km. How long will this walk take?



A 2 hours **B** 2 hours and 30 minutes **C** 3 hours **D** 9 hours **E** 18 hours

3. Three different odd numbers add up to 67. The numbers could be

A 5, 31, 31 **B** 7, 30, 30 **C** 9, 27, 33 **D** 11, 27, 29 **E** 13, 20, 34

4.

$$3 + \text{★} = 25$$

$$\text{★} - \text{▲} = 5$$

What is the value of the triangle?

A 13 **B** 14 **C** 15 **D** 16 **E** 17

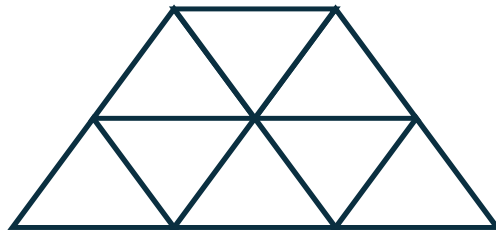
FIRST MATHEMATICS CHALLENGE

5. Flora has 5 sunflowers, Istry has 3 times as many as Flora.
How many do they have altogether?



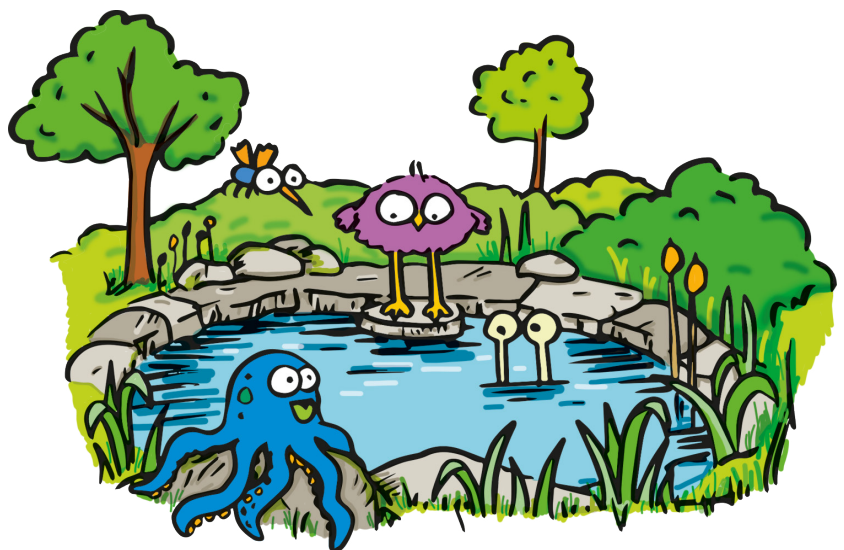
A 8 **B** 15 **C** 20 **D** 25 **E** 30

6. How many triangles are there in this picture ?



A 8 **B** 9 **C** 10 **D** 11 **E** 12

7. Sally has a wildlife pond in her garden that needs filling with water.
It takes 10 buckets of water to fill the pond.
Water from 5 full milk bottles will fill a bucket.
Sally knows that 4 jugs of water will fill a milk bottle.
How many jugs of water will it take to fill the pond?



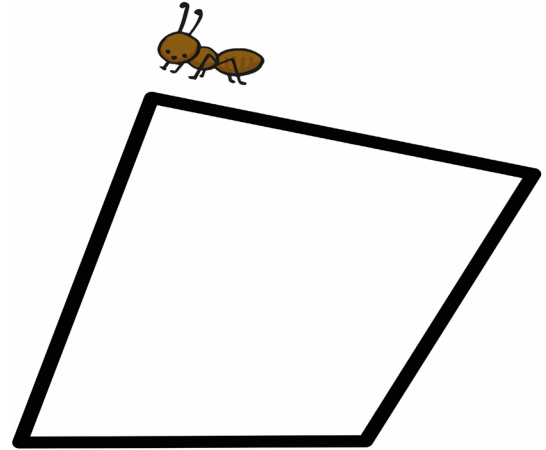
A 19 **B** 20 **C** 40 **D** 50 **E** 200

FIRST MATHEMATICS CHALLENGE

8. My father was 35 on my 7th birthday.
How old will he be on my 14th birthday?

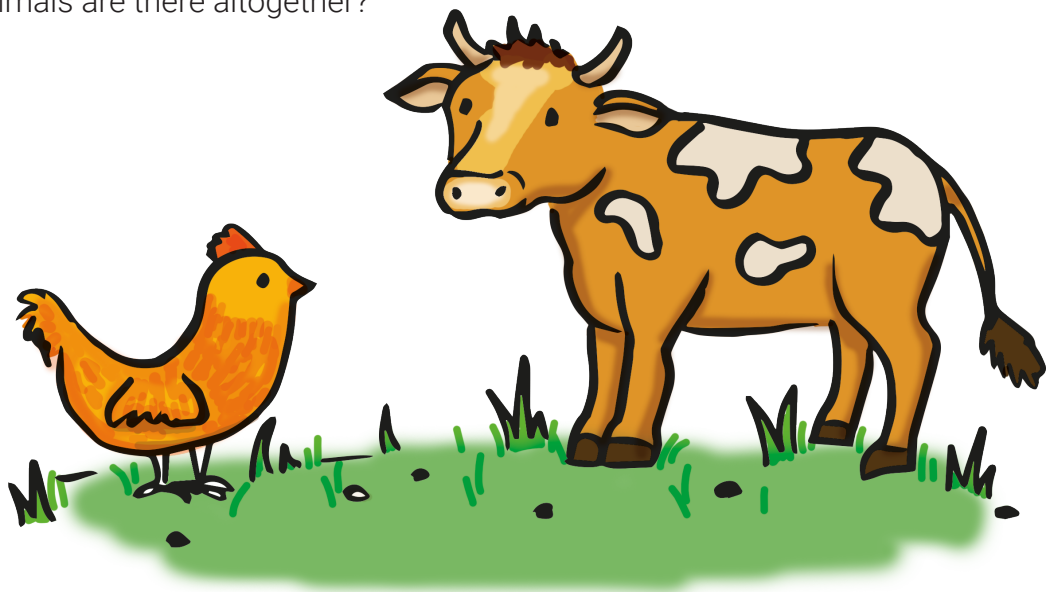
A 35 **B** 42 **C** 49 **D** 55 **E** 70

9. Anthony walked all the edges of this shape.
Starting on the shortest side, the length of each side
increased by 1cm.
The total distance he walked was 46cm.
What is the length of the shortest side?



A 9 **B** 10 **C** 11 **D** 12 **E** 13

10. A farmer has 20 cows, some chickens and no other animals.
The total number of chicken legs is equal to the number of cow legs.
How many animals are there altogether?



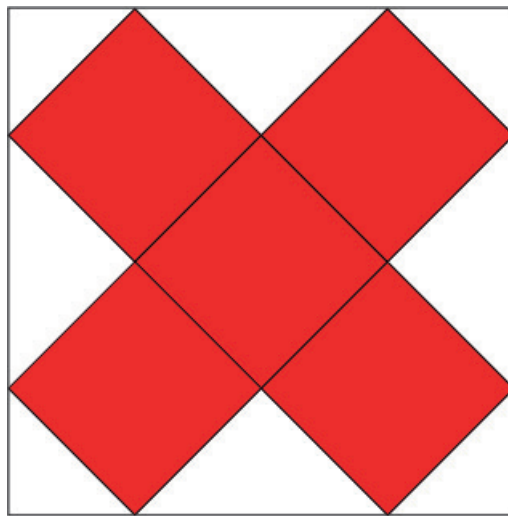
A 30 **B** 40 **C** 50 **D** 60 **E** 70

FIRST MATHEMATICS CHALLENGE

11. I think of a number and add 15 to it. The answer is 4 times the number I first thought of.
What is that number?

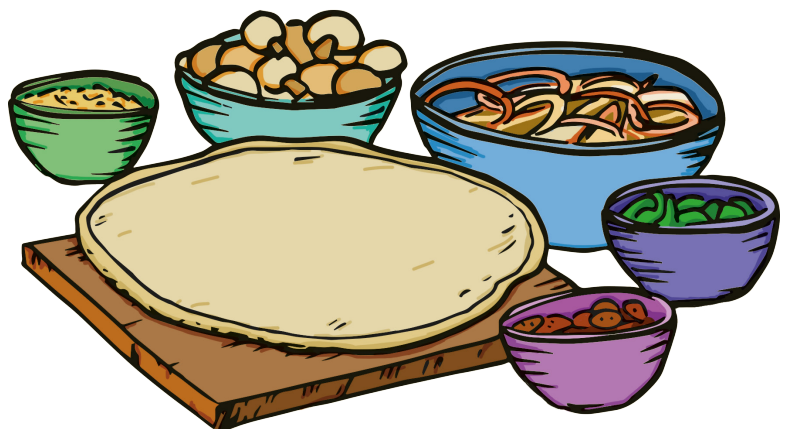
A 4 B 5 C 15 D 20 E 60

12. What fraction of the diagram is shaded ?



A $\frac{1}{2}$ B $\frac{5}{8}$ C $\frac{2}{3}$ D $\frac{3}{4}$ E $\frac{7}{8}$

13. At Luciano's Pizza Palace there are
5 different pizza toppings.
Peppa Roni is going to choose 2 different
toppings for her pizza.
How many different combinations of
pizza toppings could she make?



A 2 B 4 C 5 D 7 E 10

FIRST MATHEMATICS CHALLENGE

14. Which same digit can be placed in every box so that the sum is true?

$$\begin{array}{r} \boxed{} \boxed{} \\ + \boxed{} \boxed{} \\ \boxed{} \boxed{} \\ \hline 1 \quad 9 \quad 8 \end{array}$$

A 4

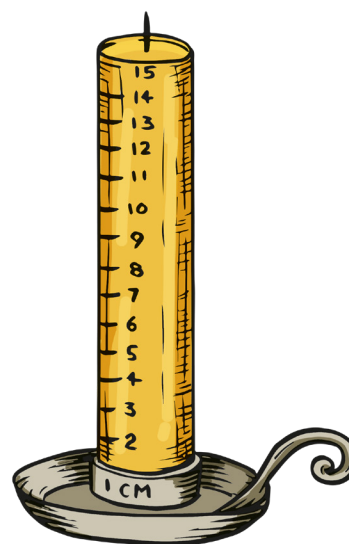
B 5

C 6

D 7

E 8

15. A candle burns down 2cm per hour.
The bottom 1cm is in the candlestick
and will not burn.
Bethany has a candle that is 15cm long.
She put it into the candlestick and lit it at 11am,
when will it stop burning?



A 10 pm

B 9 pm

C 8 pm

D 7 pm

E 6 pm

FIRST MATHEMATICS CHALLENGE

16.

There are 35 children in Mrs. Singer's school choir.

20 children can read music

20 children in the choir are girls

14 girls can read music

How many boys cannot read music?



A 6

B 9

C 10

D 15

E 20

17. Which of the following numbers, when added to 2024, makes a number that can be divided by 3 with no remainder?

A 4

B 5

C 6

D 8

E 9

18. Find the answer to $100000 - 10000 - 1000 - 100 - 10$

A 88 900

B 88 890

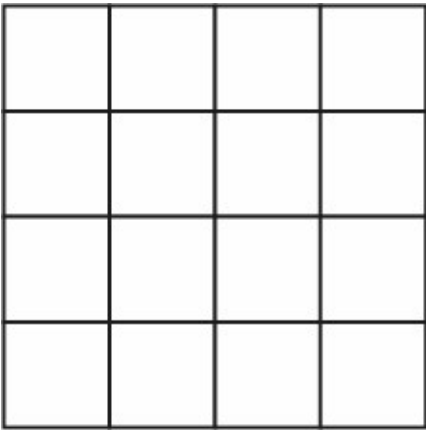
C 88 990

D 89 000

E 90 000

FIRST MATHEMATICS CHALLENGE

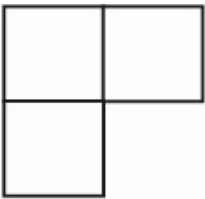
19. Here are 5 different tiles A, B, C, D and E.
- You can only use one type of tile to cover the grid. There must be no overlapping, or going over the sides of the grid. You may use as many of the **same** tile as you want.
- Which of these tiles **cannot** be used to cover the grid?



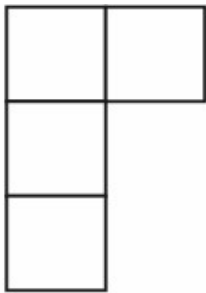
A



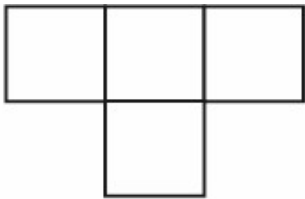
B



C



D



E

A A

B B

C C

D D

E E

20. Peter, Qureshi, Ramesh, Sam and Thelma form a queue to get into a football match.
- Ramesh is fourth in the queue.
- Peter comes immediately after Sam, but before Thelma.
- Qureshi is ahead of Peter.
- Who is first in the queue?

A Peter

B Qureshi

C Ramesh

D Sam

E Thelma