

FIRST MATHEMATICS CHALLENGE



NAME CLASS

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

Practice 1

What is $100 - 30$?



- A** 60 **B** 70 **C** 80 **D** 90 **E** 100

Practice 2

Which of these shapes is a rectangle?

- A**  **B**  **C**  **D**  **E** 

Practice 3

Which of these multiplications has an odd number as an answer?

- A** 3×6 **B** 4×6 **C** 5×5 **D** 1×8 **E** 10×1

MATHEMATICAL ASSOCIATION



Supporting mathematics in education

©The Mathematical Association
259 London Road
Leicester
LE2 3BE

www.primarymathschallenge.org.uk/fmc

TOTAL MARKS

/20

FIRST MATHEMATICS CHALLENGE

1. How many even numbers are there between 9 and 27?

A 7

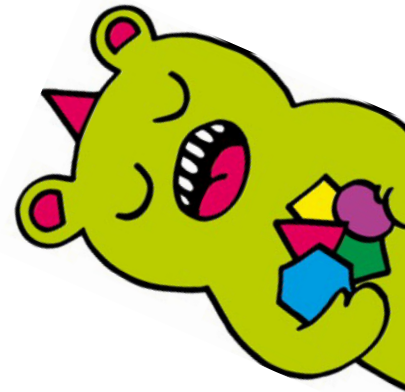
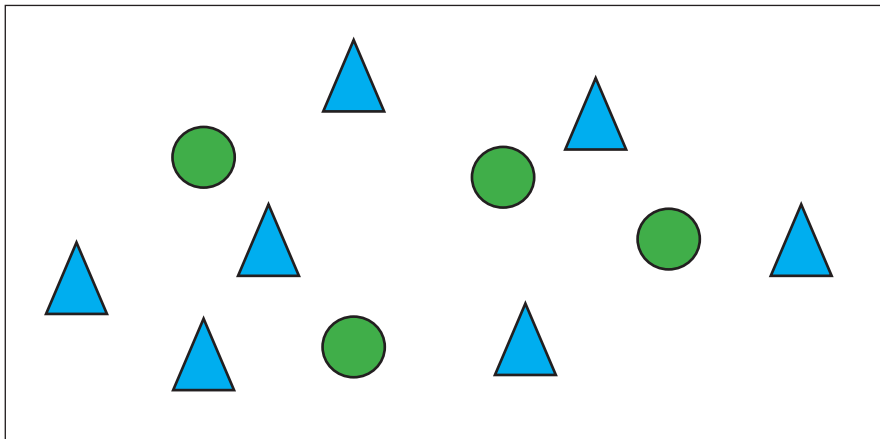
B 8

C 9

D 11

E 18

2. How many more triangles are there than circles?



A 3

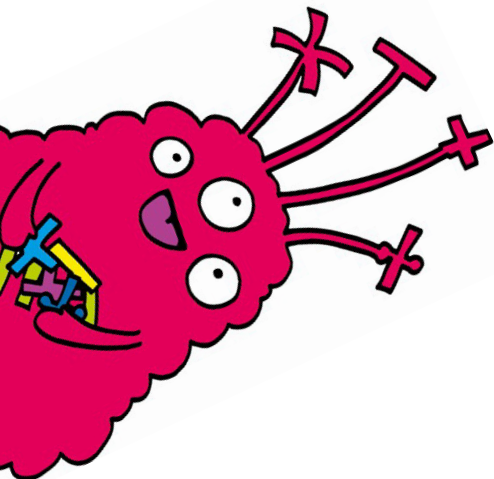
B 4

C 7

D 10

E 11

3. Akshay wants to give a sticker to each of the 30 children in his class.
There are 12 stickers on a sheet.
How many sheets of stickers will Akshay need?



A 2

B 3

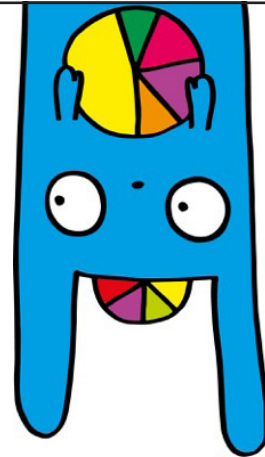
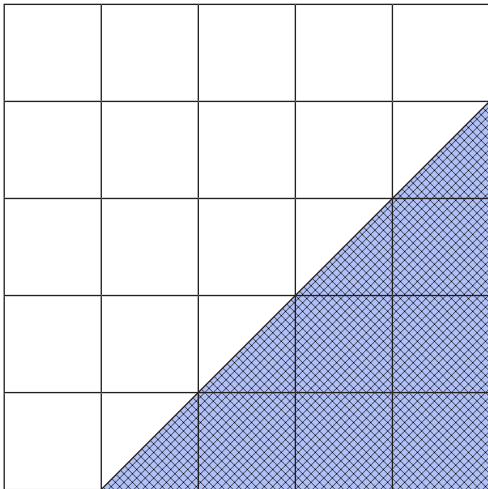
C 4

D 5

E 6

FIRST MATHEMATICS CHALLENGE

4. What fraction of the whole square is shaded?



A $\frac{2}{5}$

B $\frac{1}{3}$

C $\frac{1}{4}$

D $\frac{8}{25}$

E $\frac{10}{25}$

5. How many triangles have the same total number of sides as nine squares?

A 3

B 6

C 7

D 11

E 12

6. Bonnie has only four coins in her pocket and they are **all different**. She knows that the total amount is between 20p and 30p. How much money does she have?



A 19p

B 23p

C 27p

D 28p

E 29p

FIRST MATHEMATICS CHALLENGE

7. Which of these numbers can be added to 2022 to make a number in the 5 times table?

A 5

B 11

C 100

D 219

E 2003

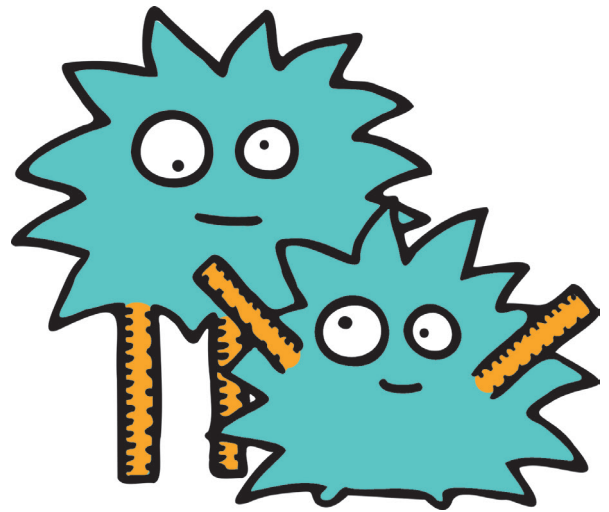
8.

Sonja's grandad bought a jar of sweets.

He has 8 grandchildren and gave each one four sweets.

There were 9 sweets left in the jar.

How many sweets were in the jar when he bought it?



A 21

B 23

C 32

D 41

E 50

9. Which letter in the word MATHS does not have a line of symmetry, also known as a mirror line?

A M

B A

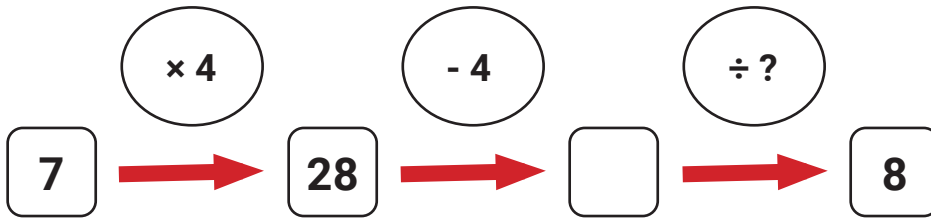
C T

D H

E S

FIRST MATHEMATICS CHALLENGE

10. What number replaces the question mark to make the calculation correct?



A 2

B 3

C 4

D 6

E 7

11. School starts at 08:45 and break time is at 11:00.
How many minutes is it from the start of school to break time?



A 120 minutes B 135 minutes C 140 minutes D 150 minutes E 200 minutes

12. Which padlock will Professor Code open by following the clues below?

Read the individual digits from left to right.

The sum of the first digit and the last digit is 10.

The third digit is a multiple of 3.

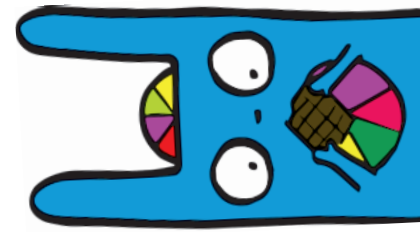
The second digit is greater than the third digit.

Most of the digits are odd.



FIRST MATHEMATICS CHALLENGE

13. Munchy Monster ate four fifths of a bar of chocolate.
24g of chocolate was not eaten. How much did Munchy Monster eat?



- A 24g B 28g C 48g D 50g E 96g

14. Sam Smart is choosing a shirt and a tie to wear to school.
He has a choice of three shirts: a blue shirt or a red shirt or a yellow shirt.
He has a choice of three ties: a blue tie, a yellow tie, or a blue bow-tie.
In how many of Sam Smart's shirt and tie combinations will he be wearing the colour blue?



- A 3 B 5 C 7 D 9 E 11

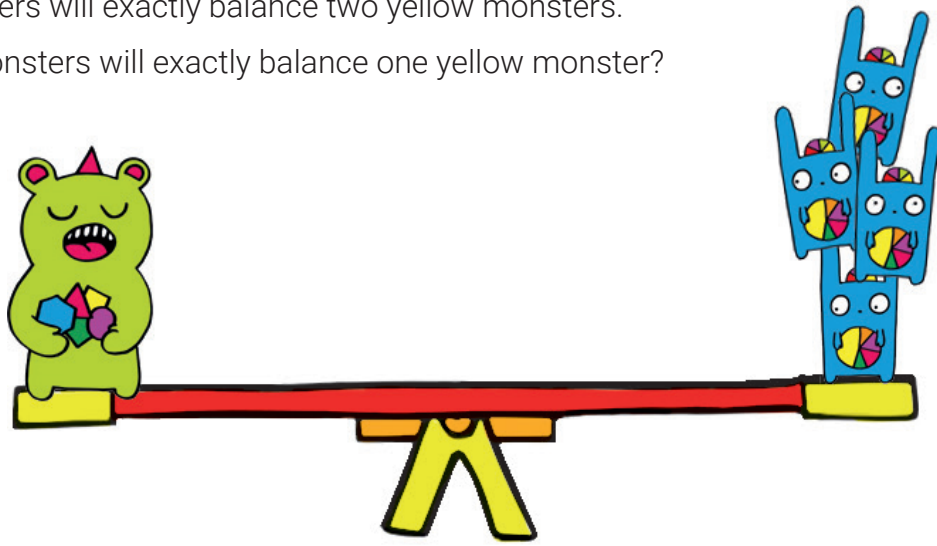
15. At the school cake sale Marzi Pan buys two cupcakes and two biscuits for £1.60.
Vicky Sponge buys three cupcakes and two biscuits for £1.90.
How much does one cupcake cost?



- A 10p B 20p C 30p D 40p E 50p

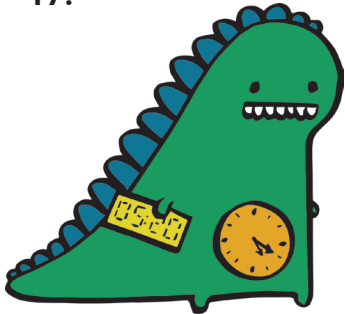
FIRST MATHEMATICS CHALLENGE

16. Four blue monsters will exactly balance one green monster.
Three green monsters will exactly balance two yellow monsters.
How many blue monsters will exactly balance one yellow monster?



- A 4 B 6 C 8 D 10 E 12

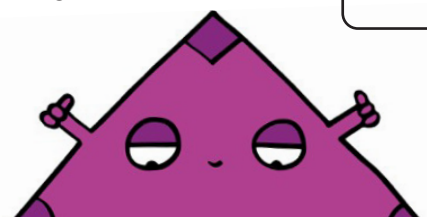
17. Twelve children take part in a race. Anwar is one of them.
The number of children who finished after Anwar was five more than the number who finished before him.
In what position did Anwar finish the race?



- A 1st B 3rd C 4th D 5th E 6th

18. Dr. Getwell's age is an even two-digit number that is less than 60.
The sum of the digits is 9.
The product of the digits is 20.
How old is Dr. Getwell?

- A 27 B 36 C 45 D 48 E 54



FIRST MATHEMATICS CHALLENGE

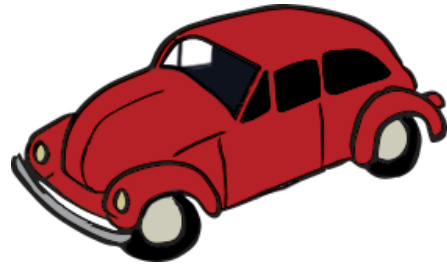
19. Erin makes models. She has 4 models to arrange in a line on a shelf.

They are an aeroplane, a boat, a car and a doll.

The boat must be next to the car.

The car must be next to the aeroplane.

How many different ways can Erin arrange her models on the shelf?



A 2

B 3

C 4

D 5

E 6

20. Sampath loves swimming so much that he swam 50 km in 5 days!

If each day he swam 3km more than the day before, how far did he swim on the first day?



A 3km

B 4km

C 5km

D 6km

E 7km