

PRIMARY SCHOOL CHALLENGE 2025

LEVEL 0 CHALLENGE GRADE 3 ROUND TWO

INSTRUCTIONS

1. The time allocated for this paper is $1\frac{1}{2}$ hours. All participants must remain for the full allocated time. Under no circumstances may extra time be given.
2. **This paper consists of 15 Questions over 3 Sections.**

Section A consists of 5 multiple choice questions. Each question is worth 1 mark. Circle the letter you have chosen as your answer in pen. Should you wish to change an answer, put a cross over the letter and then circle your new chosen letter.

Section B consists of 5 questions where only an answer must be given. Each question is worth 2 marks. Write only your answer in the allocated space.

Section C consists of 5 questions where full working must be shown in the space provided. These questions are each worth 4 marks, and part marks may be awarded in this section only. Your final answer must be written in the allocated space.
3. Negative marking will not be applied.
4. Calculators (and other calculating devices) and geometry instruments are not allowed.
5. Figures are not necessarily drawn to scale.
6. Answer all questions on the answer sheet provided.
7. Paper may be used for rough working.

SECTION A

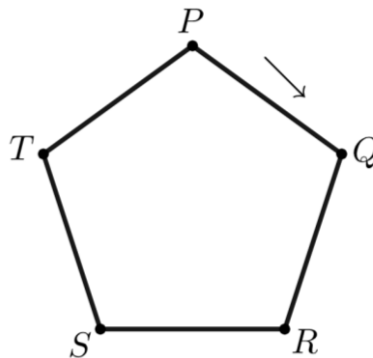
1. It is the year 2025. It is the 10th anniversary of the Beyond Maths Challenge, and you are in Grade 3. What is the value of the sum below?

$$2025 + 10 + 3$$

- A. 2028 B. 2033 C. 2031 D. 2038 E. 2035

2. A regular pentagon $PQRST$ is shown in the figure below. Each side is 6cm in length. An ant is sitting at point P . The ant begins crawling around the pentagon in a clockwise direction. The ant moves 1cm every one second.

Which side will the ant be on after 33 seconds?



- A. PQ B. QR C. RS D. ST E. TP

3. I am an odd natural number bigger than 9 and less than 100. All my digits are all the same.

How many different numbers could I be?

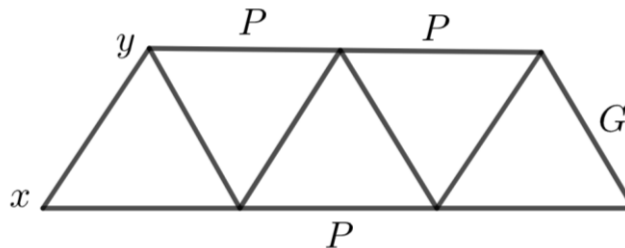
- A. 9 B. 6 C. 4 D. 3 E. 5

4. There are 26 grade 3's in a class. Fourteen are girls. The teacher asks that they all stand together in pairs with as many boy/girl pairs as possible.

How many girl/girl pairs will there be?

- A. 1 B. 2 C. 3 D. 4 E. 5

5. Eleven toothpicks are to be joined together into the shape shown below. The toothpicks are going to be painted either Pink (*P*), Yellow (*Y*), or Green (*G*). Four of the toothpicks are already painted as shown.



What colour could the toothpick shown as *xy* be painted if every triangle has sides of a different colour?

- A. *G or P* B. *Y* C. *Y or G* D. *G* E. *P or Y*

SECTION B

NB: Write only your final answer in the allocated space.

6. A piece of string is 142cm long. Pieces measuring only 3cm, 45cm, or 67cm are cut exactly from the string. No string is left over. At least one of each of these lengths was cut.

What is the total number of lengths that the string was cut into?

7. We say that a number divides another number if it does not leave a remainder. (For example, 5 divides 10 since $10 \div 5 = 2$ with no remainder. 5 does not divide 13 since $13 \div 5 = 2$ remainder 3)

In List 1 below, choose a number which divides 15.

In List 2 below, choose a number which does not divide 12.

LIST 1

7

3

4

LIST 2

3

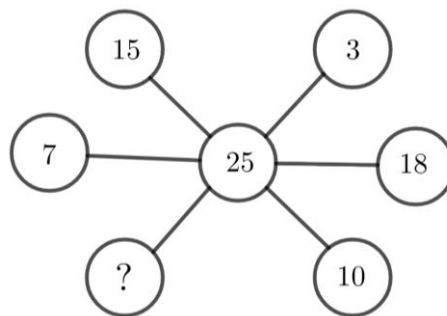
4

5

Add your two chosen numbers together.

What is the value of your sum?

8. A number pattern is hidden in the drawing below.



What number goes in the circle with the question mark?

9. Four different natural numbers are added together.
None of the numbers are less than 3.
The sum of the four numbers is 23.

What is the largest possible number out of the four numbers?

10. Bella's father is 47 years old and it is his birthday. His birthday cake has 47 candles. He asks Bella to blow out all the candles.

Bella blows out 18 candles on her first try.
 She then blows out more candles on her second try.
 On her third try she blows out 16 candles.
 All the candles on the cake are out now.

How many candles did Bella blow out on her second try?

SECTION C

NB: Show all working and write your final answer in the allocated space.
Part marks may be awarded.

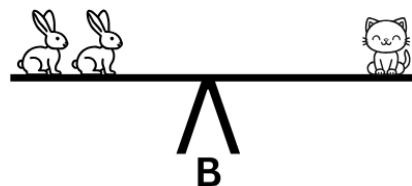
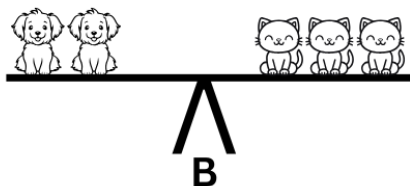
11. Eli is thinking of a 3-digit even natural number. The number is larger than 450 but smaller than 470. The unit (last) digit is larger than both of the other two digits.

How many different such 3-digit numbers could Eli have been thinking about?

(Show all working)

12. Some animals are sitting on two seesaws. There is a perfect balance between the animals on the left of *B* and the animals on the right of *B* on each seesaw.

(So for example, 2 dogs balance perfectly with 3 cats)



How many rabbits will balance perfectly with 4 dogs?

(Show all working)

13. What is the sum of all the 1-digit and 2-digit numbers you can make using only the digits 1 and 3?
Each of the digits 1 and 3 may only be used once in any of your numbers.

(Show all working)

14. A team plays 3 games of soccer. The table below shows the number of shots on goal in each game, together with the number of saves made by the goalkeeper in each game. The goalkeeper made 3 saves in game 3.

GAME	SHOTS ON GOAL	SAVES
1	5	2
2	10	4
3	?	3

The goalkeeper saved half of all the shots on goal over all 3 games.

How many shots on goal were there in game 3?

(Show all working)

15. 85 bees fly into a flower garden. Either 3 bees or 4 bees land together on the flowers. (So every flower has only 3 or 4 bees on it)



What is the smallest number of flowers in the garden such that every bee can land on a flower?

(Show all working)

***** END *****