



Junior Maths Mastery Challenge 2025

Paper B

Student Name: _____

Student No.: _____

DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED.

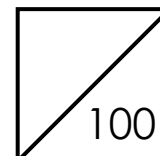
Read the instructions on the **answer sheet** and fill in your **name, school** and **other information**.

Record your answers in your **answer sheet**.

You have **1 hour 30 minutes** to answer all 25 questions.

Junior Maths Mastery Challenge (2025)

Paper B



Section A (70 marks)

Questions 1 to 10 carry 3 marks each.

1. A bus leaves the terminal with 30 passengers. At the 1st stop, 12 passengers get off and 6 passengers get on. At the 2nd stop, 5 passengers get off and 2 passengers get on. How many passengers are there when the bus is driven out of the 2nd stop?

- (A) 5 (B) 19 (C) 20
(D) 21 (E) 39

2. Which string is the longest?

String A



String B



String C



String D

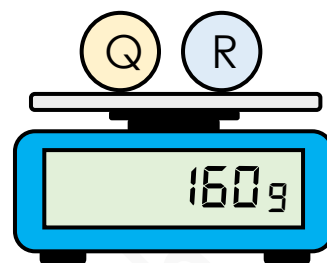
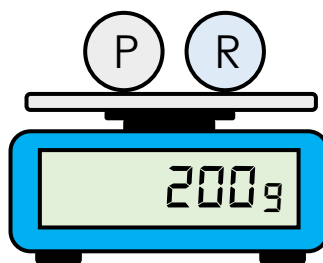
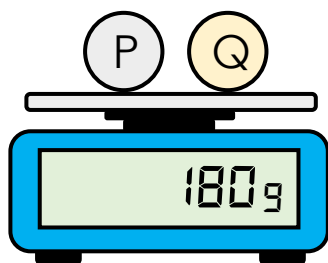


String E



- (A) A (B) B (C) C
(D) D (E) E

3. Find the mass of Ball Q.



(A) 70 g

(B) 80 g

(C) 90 g

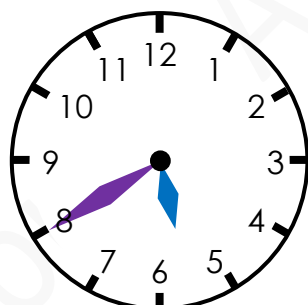
(D) 100 g

(E) None of the above

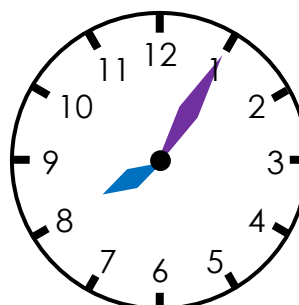
4. Tim wants to buy a gift that cost \$50. On the 1st day, he saves \$5. On the 2nd day, he saves \$6. On the 3rd day, he saves \$7 and so on. On which day will he have saved enough to buy the gift?

(A) 5th (B) 6th (C) 7th
(D) 8th (E) 10th

5. Ken watched a movie. Its start time and end time are shown below. How long was the movie?



Start



End

(A) 120 min (B) 135 min (C) 145 min
(D) 150 min (E) 220 min

6. The numbers below follow a pattern.

(1) (1) (2) (3) (5) (8) (13) ...

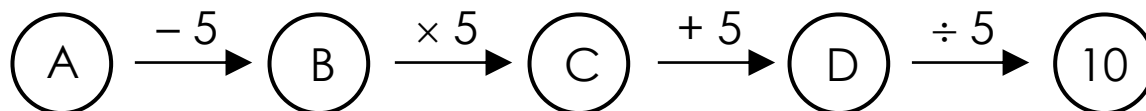
What is the next number?

- (A) 20 (B) 21 (C) 22
(D) 23 (E) 24

7. There are 16 two-dollar notes and five-dollar notes. The total value of the notes is \$62. How many \$5 notes are there?

- (A) 6 (B) 7 (C) 8
(D) 9 (E) 10

8. Study the diagram below. Letters A to D each represents a number.

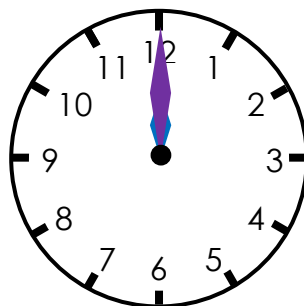


What number does A represent?

- (A) 14 (B) 16 (C) 18
(D) 32 (E) None of the above
9. Six \$5 notes and nine \$10 notes are shared equally among Ash, Ben and Cathy. Each of them gets the same number of notes. Ash gets the greatest possible amount and Cathy gets the smallest possible amount. How much does Ben get?

- (A) \$25 (B) \$40 (C) \$45
(D) \$50 (E) None of the above

10. At 12 midnight, the minute hand is exactly on top of the hour hand on the clock as shown below.

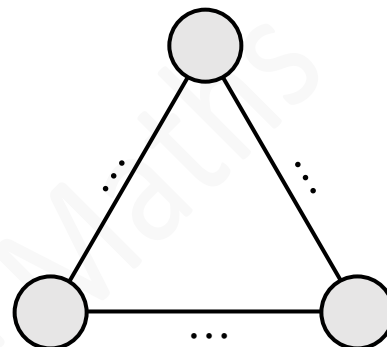


From 12 midnight to 12 noon on the same day, how many times will the minute hand be exactly on top of the hour hand?
(Include 12 midnight and 12 noon in this 12-hour duration.)

- (A) 2 (B) 10 (C) 11
(D) 12 (E) 13

Questions 11 to 20 carry 4 marks each.

11. Lynn places some coins along the outline of a triangle. There is a coin on each vertex. There are 6 coins on each side of the triangle. How many coins does she use?



- (A) 14 (B) 15 (C) 16
(D) 17 (E) 18

12. Letters A and B are two different numbers.

$$\boxed{A} + \boxed{B} = 50$$

$$\boxed{A} - \boxed{B} = 16$$

What number is Letter A?

- (A) 16 (B) 17 (C) 33
(D) 34 (E) 66

13. Each shape below represents a number.

$$\bigcirc + \bigcirc + \bigcirc + \bigcirc + \bigcirc = 15$$

$$\triangle + \triangle + \triangle + \triangle + \triangle = 25$$

$$\diamond + \diamond + \diamond + \diamond + \diamond = 35$$

Find the value of $\bigcirc + \triangle + \diamond$.

(A) 12

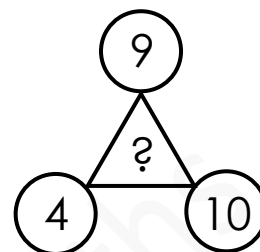
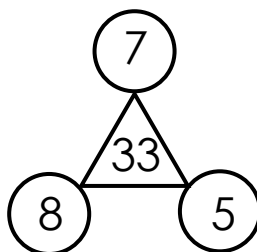
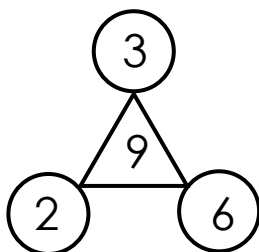
(B) 13

(C) 14

(D) 15

(E) None of the above

14. Find the missing number in the number pattern below.



(A) 23

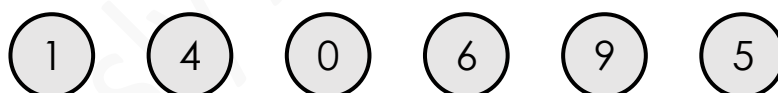
(B) 26

(C) 31

(D) 46

(E) 49

15. Use the 6 digits given below to form two 3-digit even numbers. Each digit can only be used once.



What is the greatest value we can get when we subtract one number from the other?

(A) 806

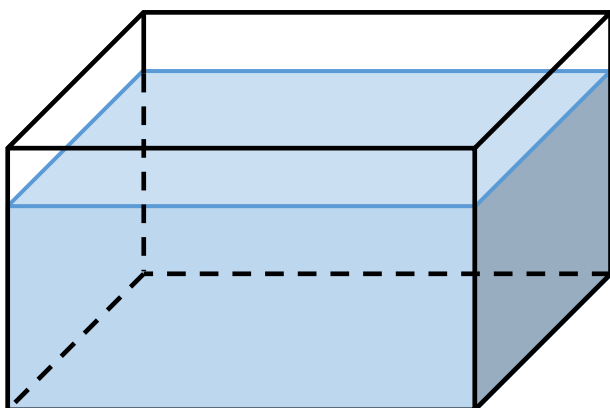
(B) 814

(C) 852

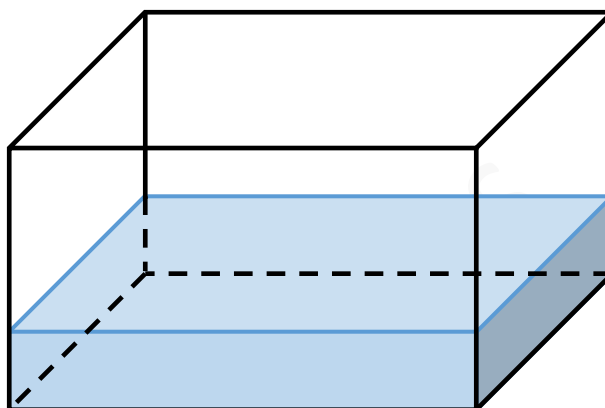
(D) 859

(E) 861

16. Tank A contains 60 litres of water. Tank B contains 20 litres of water.



Tank A

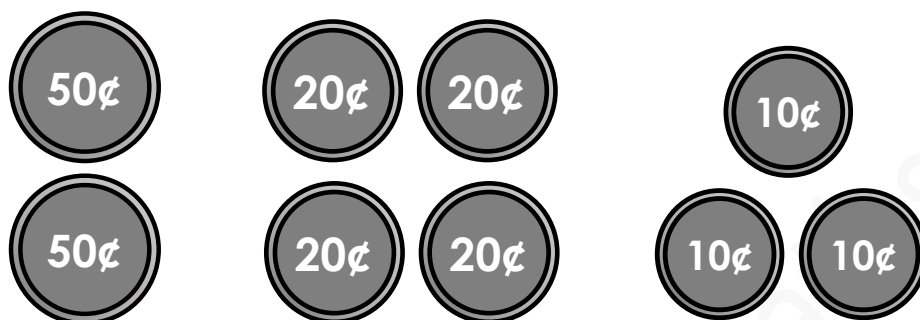


Tank B

Paul uses a pail to transfer 5 litres of water at a time from Tank A to Tank B. How many times must he do this so that both tanks contain the same amount of water?

- (A) 3 (B) 4 (C) 5
(D) 6 (E) None of the above

17. Tom wants to buy an eraser that costs 80¢.
He has the following coins.



How many ways can he pay an exact amount for the eraser?

(A) 2

(B) 3

(C) 4

(D) 5

(E) 6



18. Alice wants to put 17 candies into 3 identical bags such that each bag contains an odd number of candies. How many ways can she put the candies into the bags?

(A) 8 (B) 9 (C) 10
(D) 11 (E) 12

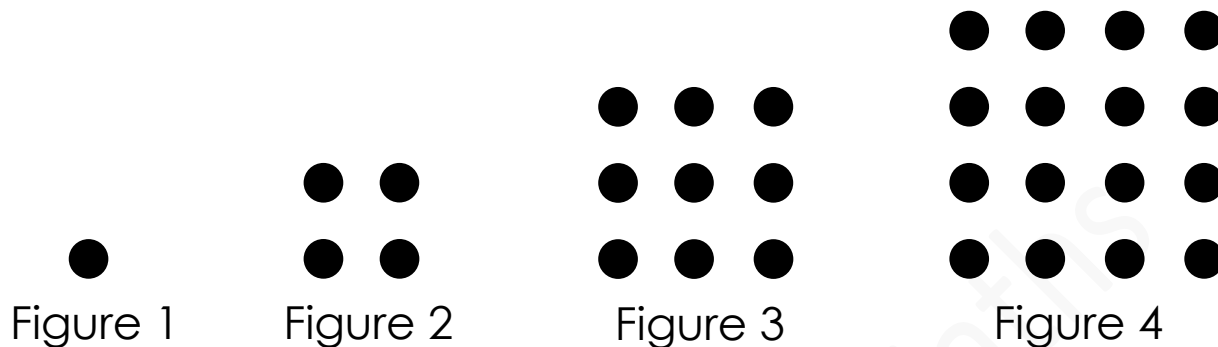
19. Sarah writes the numbers 1 to 30 on a board.

1 2 3 4 5 6 ... 29 30

How many digits does she write altogether?

(A) 49 (B) 50 (C) 51
(D) 60 (E) None of the above

20. The figures below follow a pattern.



How many dots will Figure 10 have?

- (A) 50 (B) 60 (C) 70
(D) 80 (E) None of the above



Section B (30 marks)

Questions 21 to 25 carry 6 marks each.

21. Lisa and her twin sister are 12 years old. Their mother is 40 years old. In how many years will their total age be 79 years?

- (A) 3 years (B) 5 years (C) 10 years
(D) 15 years (E) None of the above



22. In the equation below, letters X and Y represent different digits.

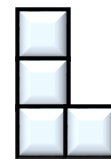
$$\begin{array}{r} X \ Y \\ X \ Y \\ + \ Y \ X \\ \hline 1 \ 8 \ 6 \end{array}$$

What digit does X represent?

- (A) 3 (B) 4 (C) 5
(D) 6 (E) None of the above

23. Ben has some L-shaped tiles shown on the right.

Which figure(s) below can he form using the tiles he has?



1 L-shaped tile

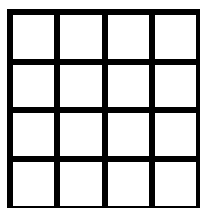


Figure 1

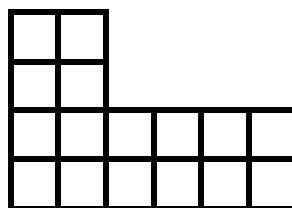


Figure 2

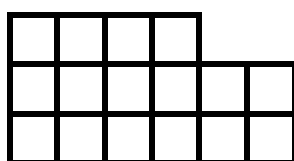


Figure 3

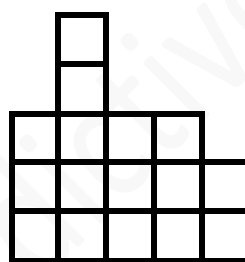


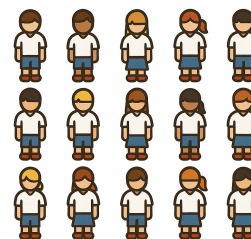
Figure 4

- (A) Figure 1 only
- (B) Figures 1 and 2 only
- (C) Figures 1 and 3 only
- (D) Figures 1, 2 and 3 only
- (E) All of the figures

24. Some pupils stand spaced out evenly, forming a rectangle.

5 pupils are to the right of John and
4 pupils are to his left.

3 pupils are in front of him and
2 pupils are behind him.



How many pupils are there altogether?

(A) 40

(B) 45

(C) 50

(D) 60

(E) None of the above

25. Ms Tan has 3 white hats and 2 blue hats. Her three sons, Ben, Gab and John, close their eyes. She puts a hat on each of their heads.

Ben, Gab and John take turns to open their eyes. Ben opens his eyes and says, 'I do not know the colour of the hat on my head.'

Gab opens his eyes and says, 'I too do not know the colour of the hat on my head.'

John, without opening his eyes, guesses the colour of the hat on his head correctly.

Which of the following is a possible combination?

- (A) Ben, Gab and John – white hat
- (B) Ben and Gab – white hat, John – blue hat
- (C) Ben – white hat, Gab and John – blue hat
- (D) Gab – white hat, Ben and John – blue hat
- (E) None of the above

END OF PAPER

Seriously Addictive Maths

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