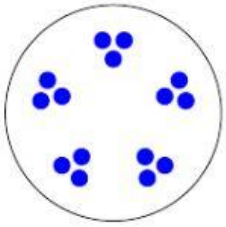
Middle Primary Division

Questions 1 to 10, 3 marks each

1. How many dots are on the plate?



(A) 10 (B) 12 (C) 13 (D) 14 (E) 15

2. Jill had 15 grapes. She ate 5. How many are left?

(A) 7 (B) 8 (C) 9 (D) 10 (E) 11

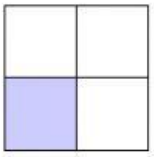
3. This grid gives the position of different shapes. For example, a ♢ is in position B4.

Which shape is in position D2?

	1	2	3	4
A	⊕	♡	♡	⊙
B	△	□	□	♢
C	⊙	⊙	⊕	♡
D	△	♡	⊕	△

(A) ♢ (B) ⊕ (C) ♡ (D) ⊙ (E) △

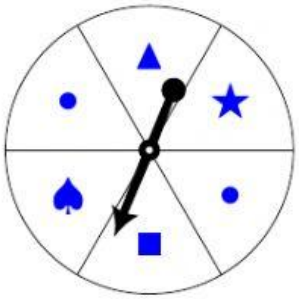
4. What fraction of this shape is shaded?



(A) $\frac{1}{2}$ (B) $\frac{1}{3}$ (C) $\frac{1}{4}$ (D) $\frac{1}{5}$ (E) $\frac{1}{6}$

5. On this spinner, which shape are you most likely to spin?

(A) ▲ (B) ■ (C) ★ (D) ♠ (E) ●



6. What time is shown on this clock?

(A) twelve o'clock

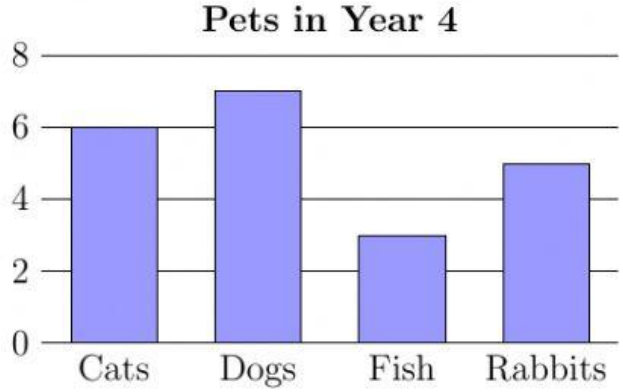
(B) a quarter to nine

(C) a quarter past three

(D) a quarter past twelve

(E) three o'clock

7. The graph below shows the number of pets owned by the students in a Year 4 class.



How many pets does this class have altogether?

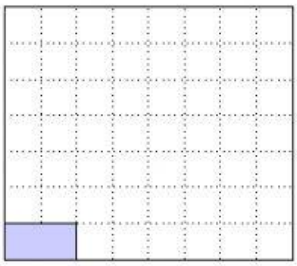
(A) 24 (B) 22 (C) 21 (D) 14 (E) 4

8. Which number do you need in the box to make this number sentence true?

$$19 + 45 = 20 + \square$$

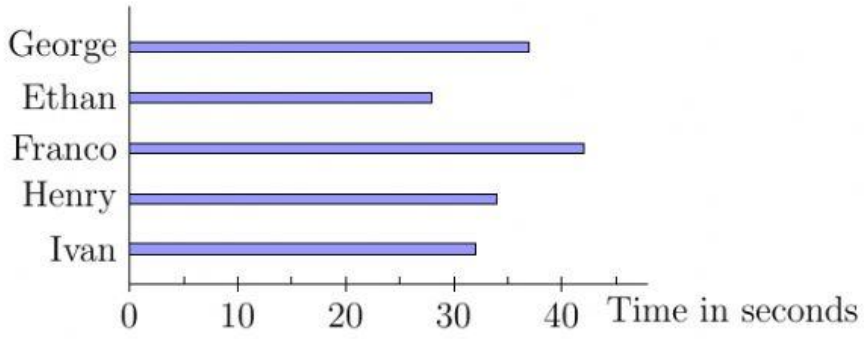
(A) 34 (B) 44 (C) 46 (D) 64 (E) 84

9. How many 2 by 1 rectangles will fit exactly into an 8 by 7 rectangle?



(A) 14 (B) 28 (C) 36 (D) 56 (E) 63

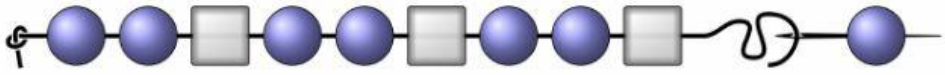
10. Five swimmers were in a 50 m race. The time each swimmer took to finish the race is shown in this graph. Who won the race?



(A) George (B) Ethan (C) Franco (D) Henry (E) Ivan

Questions 11 to 20, 4 marks each

11. Cianna is stringing beads for a necklace, starting with two round beads, then a square bead, and then repeating this pattern of three beads.



She finished her necklace with a round bead, which happens to be the 18th round bead. How many square beads are on her necklace?

(A) 10 (B) 12 (C) 18 (D) 6 (E) 8

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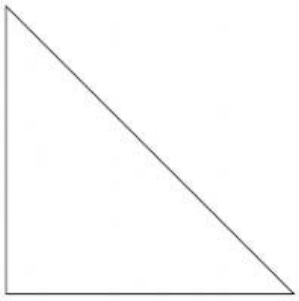
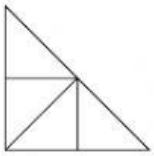
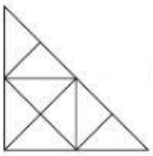
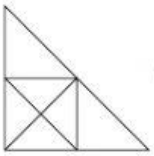
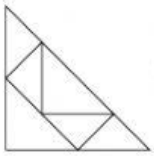
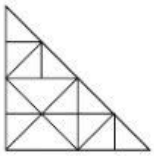
12. The triangle shown is folded in half three times without unfolding, making another triangle each time.



Which figure shows what the triangle looks like when unfolded?

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

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13. When complete, each row, column and diagonal in this diagram has a sum of 15. What is the sum of the numbers in the shaded squares?

	4	
	5	
5		

(A) 20 (B) 25 (C) 27 (D) 30 (E) 45

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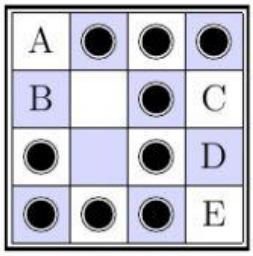
14. To which square should I add a counter so that no two rows have the same number of counters, and no two columns have the same number of counters?

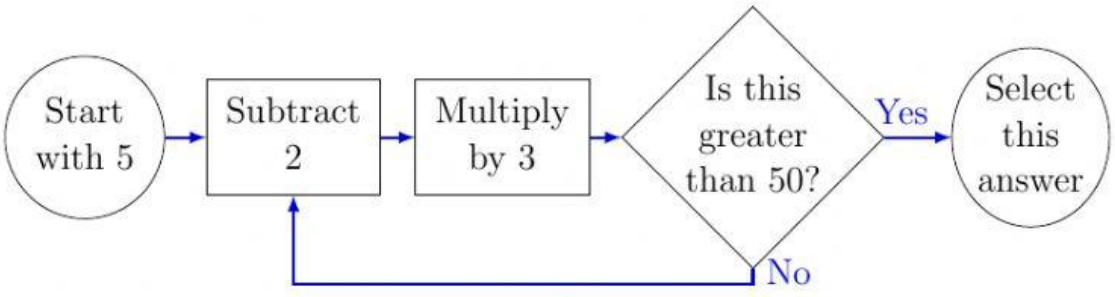
(A) A (B) B (C) C (D) D (E) E



15. John wrote his name on his book. Martha said he wrote with a black pen. Aaron said it was a brown pencil. Frankie said it was a black crayon. If each of John's friends were half right, what did he really use to write his name?

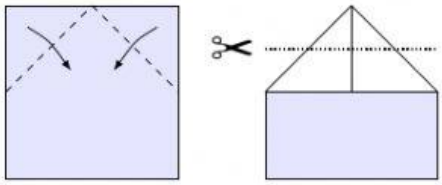
(A) a brown pen (B) a brown crayon (C) a brown pencil
(D) a black pen (E) a black pencil

16. Follow the instructions in this flow chart.

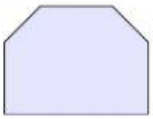
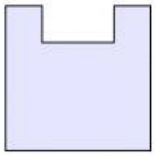
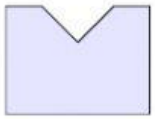


(A) 57 (B) 63 (C) 75 (D) 81 (E) 84

17. A square piece of paper is folded along the dashed lines shown and then the top is cut off.



The paper is then unfolded. Which shape shows the unfolded piece?

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

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18. Rod had fewer than 100 blocks. When he made five equal rows, he had one block left over. With four equal rows, he had one block left over. With nine equal rows, there were no blocks left over. How many blocks did he have?

(A) 18 (B) 49 (C) 81 (D) 91 (E) 99

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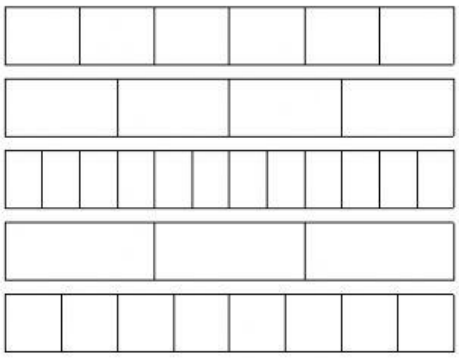
19. Simon has some 24 cm long strips. Each strip is made from a different number of equal-sized tiles.

Simon took 1 tile from each strip to make a new strip. How long is the new strip?



(A) 18 cm (B) 20 cm (C) 23 cm (D) 24 cm (E) 33 cm

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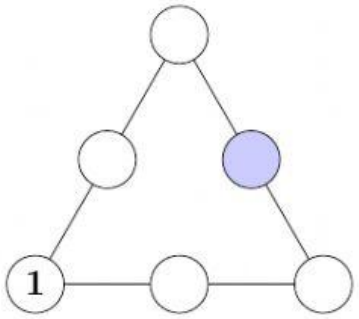
20. The numbers 1 to 6 are placed in the circles so that each side of the triangle has a sum of 10. If 1 is placed in the circle shown, which number is in the shaded circle?



(A) 2 (B) 3 (C) 4 (D) 5 (E) 6

Questions 21 to 25, 5 marks each

21. Grandpa had \$400 in his wallet. He gave half the money to his wife. From what was left, he then gave one-quarter to his son. Half of the remainder went to his grandson. How much money did his grandson receive?

(A) \$50 (B) \$125 (C) \$100 (D) \$200 (E) \$75

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22. The numbers 40, 19, 37, 33, 12, 25, 46, 18, 39, 21 are matched in pairs so that the sum of each pair is the same. Which number is paired with 39?

(A) 19 (B) 33 (C) 21 (D) 18 (E) 25

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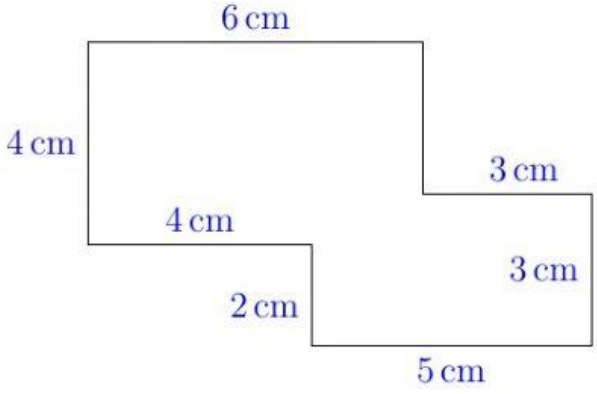
23. This shape is made from two overlapping rectangles.
What is its area in square centimetres?



(A) 35 (B) 37 (C) 39 (D) 41 (E) 43

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24. Molly is thinking of a number. Twice her number take away seven is the same as her number plus five. What is her number?

(A) 19 (B) 17 (C) 15 (D) 12 (E) 10

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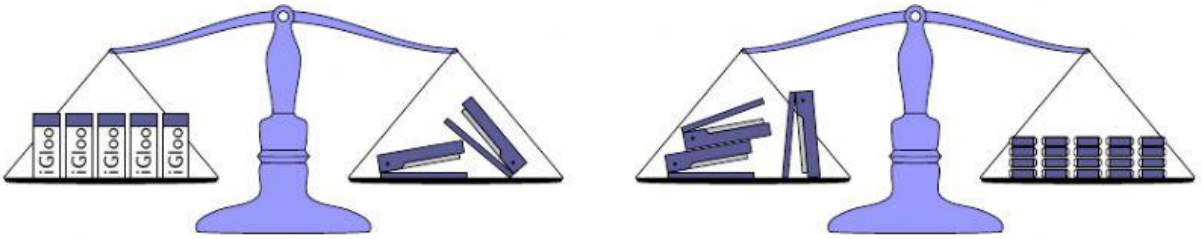
25. Tom borrowed some items from the stationery cupboard. He found that 5 glue sticks weigh the same as 2 staplers, and that 3 staplers weigh the same as 20 erasers.



How many glue sticks balance with how many erasers?

(A) 3 glue sticks with 8 erasers (B) 3 glue sticks with 50 erasers
(C) 1 glue stick with 6 erasers (D) 3 glue sticks with 17 erasers
(E) 7 glue sticks with 23 erasers

For questions 26 to 30, shade the answer as a whole number from 0 to 999 in the space provided on the answer sheet.

Question 26 is 6 marks, question 27 is 7 marks, question 28 is 8 marks, question 29 is 9 marks and question 30 is 10 marks.

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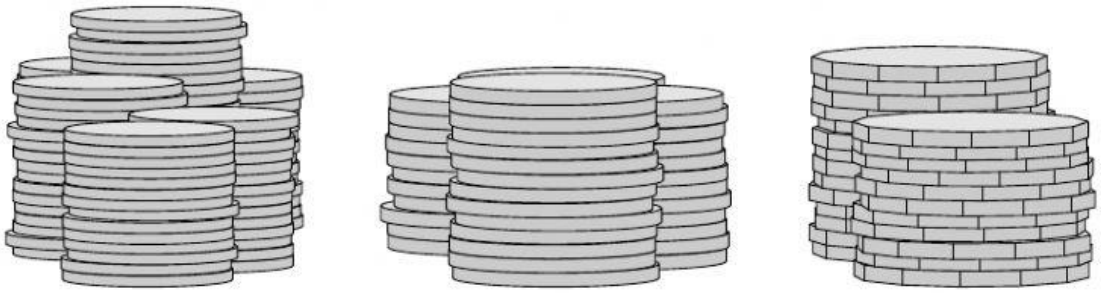
26. Jill has three large piles of coins: 10c, 20c and 50c. In how many different ways can she make one dollar?



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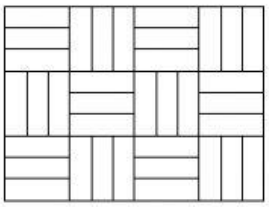
27. A newspaper open on the table had page 42 opposite page 55 because someone had removed some pages from the centre. What is the number of the last page of the newspaper?

28. Alex is designing a square patio, paved by putting bricks on edge using the *basketweave* pattern shown.
She has 999 bricks she can use, and designs her patio to be as large a square as possible.
How many bricks does she use?



29. There are many ways that you can add three different positive whole numbers to get a total of 12. For instance, $1 + 5 + 6 = 12$ is one way but $2 + 2 + 8 = 12$ is not, since 2, 2 and 8 are not all different.
If you multiply these three numbers, you get a number called the product.
Of all the ways to do this, what is the largest possible product?

30. A 3×2 flag is divided into six squares, as shown. Each square is to be coloured green or blue, so that every square shares at least one edge with another square of the same colour.
In how many different ways can this be done?