Middle Primary Division

Questions 1 to 10, 3 marks each

1. Which of these numbers is the smallest?
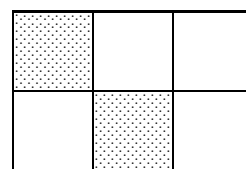
(A) 465   (B) 654   (C) 546   (D) 564   (E) 456

2. If $\square - 5 = 3$ then $\square$ equals

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

3. What fraction of the rectangle is shaded?

(A) $\dfrac{1}{2}$ (B) $\dfrac{1}{3}$ (C) $\dfrac{1}{4}$

(D) $\dfrac{1}{5}$ (E) $\dfrac{1}{6}$

4. What number must be added to 17 to get 23?

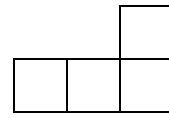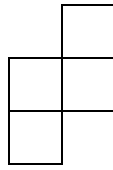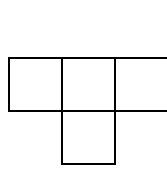(A) 40   (B) 8   (C) 30   (D) 6   (E) 10

5. It takes 3 oranges to make a glass of orange juice. How many oranges are needed to make 8 glasses of juice?

(A) 18   (B) 21   (C) 24   (D) 27   (E) 36

6. Which of the following numbers is eight thousand and seventy-nine?
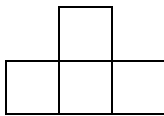
(A) 80 079   (B) 8079   (C) 879   (D) 8790   (E) 80 709
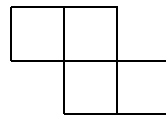
7. Here are three different shapes:-

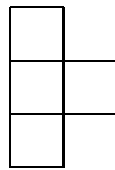Which of the shapes below **cannot** be obtained by turning around, but not over, one of the above shapes?
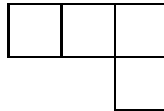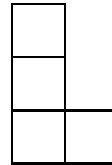
(A)

(B)

(C)

(D)

(E)

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8. Rhys and Helen play chess for 15 minutes and they finish playing at 11:21. Which clock shows the time they started playing?

(A)

(B)

(C)

(D)

(E)

9. Which of the following can be folded to make a square based pyramid?

(A)

(B)

(C)
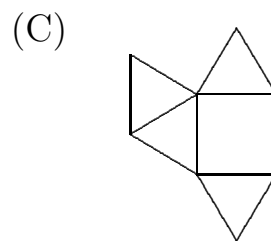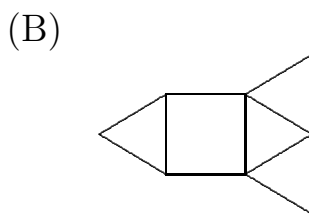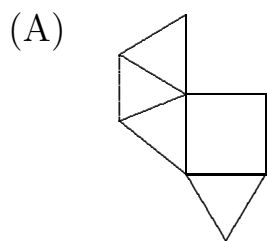
(D)

(E)
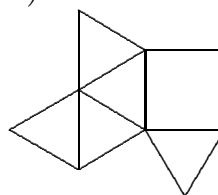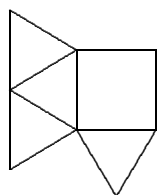
10. The number in each block is the sum of the numbers in the two blocks below it.

		12	
1	3	5	7
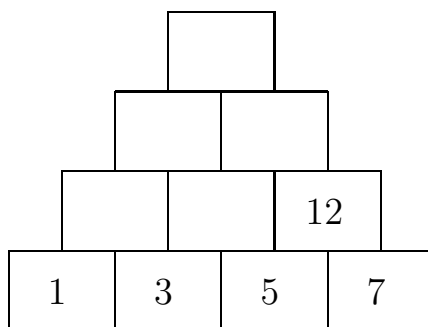
What number should be in the top block?

(A) 32   (B) 16   (C) 24   (D) 48   (E) 20

Questions 11 to 20, 4 marks each

11. A bus carries 32 students. How many buses are needed to take 323 students to the school swimming carnival?

(A) 9   (B) 10   (C) 11   (D) 12   (E) 32

12. The 30 students in a class are asked about the pets they have and the results are summarised in the graph below.

How many more cats than dogs are there?

(A) 2   (B) 5   (C) 7   (D) 10   (E) 15

13. Which of the following numbers has the tens digit twice the thousands digit and the hundreds digit equal to the sum of the other 3 digits?

(A) 1629   (B) 1924   (C) 1962   (D) 1926   (E) 6912

14. Brett is 12 years old. Daina is half of Brett's age. Omar is 13 years older than Daina. How old is Omar?

(A) 39   (B) 11   (C) 25   (D) 19   (E) 16

15. A TV cost $460 and Sam has only paid $46. How much more does he have to pay?

(A) $404   (B) $406   (C) $414   (D) $416   (E) $426

16. If each child can blow up 3 balloons in 1 minute, how many balloons can a group of 5 children blow up in 2 minutes?

(A) 18   (B) 30   (C) 20   (D) 10   (E) 15

17. I roll two dice with the numbers 1 to 6 on each one and obtain a total of 9. Which of the following numbers could not have been rolled?

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

18. Henry covers his desk using 100 post-it notes. Sally's post-it notes are half the area of Henry's and her desk is twice the area. How many of Sally's post-it notes will she need to cover her desk?

(A) 25   (B) 50   (C) 100   (D) 200   (E) 400

19. Five towns are joined by a system of roads as shown.
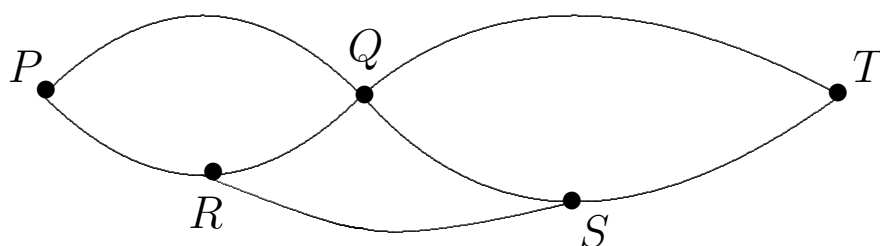
How many different ways are there of travelling from town P to town T if, on any particular journey, no road is used more than once and no town is passed more than once?

(A) 4   (B) 5   (C) 6   (D) 7   (E) 8

20. In my pocket I have three coins, a 50 c coin, a \$1 coin and a \$2 coin. How many different amounts of money can I make up using one or more coins?

(A) 4   (B) 5   (C) 6

(D) 7   (E) 9

Questions 21 to 30, 5 marks each

21. Jenny arrived at the bus stop to find she had missed the 09:27 bus by two minutes and would have to wait for the 09:57 bus. How long will she have to wait?

(A) 26 minutes   (B) 27 minutes   (C) 28 minutes

(D) 29 minutes   (E) 30 minutes

22. The digits 7, 5, and 9 are written on cards as shown.

$$\boxed{7} \quad \boxed{5} \quad \boxed{9}$$

Six different 3-digit numbers can be made using these cards. If these numbers are arranged from the smallest to the largest, in which position is 795?

(A) second   (B) third   (C) fourth   (D) fifth   (E) sixth

23. Twelve 1 by 1 tiles, like this $\square$, are arranged to form a rectangle. Which of the following could be the perimeter of that rectangle?

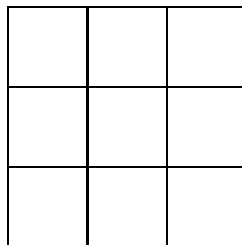(A) 18 cm   (B) 20 cm   (C) 22 cm   (D) 26 cm   (E) 32 cm

24. A 3 by 3 square is made up from nine 1 by 1 squares as shown.

A straight line is drawn though the large square. What is the largest number of small squares which the line can pass through?
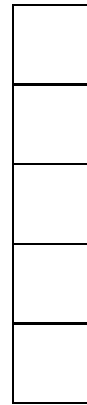
(A) 3   (B) 4   (C) 5   (D) 6   (E) 7

25. There are five blocks of different colours stacked on top of each other. The red block is above the purple block, the blue block is underneath the orange block and the green block is below the blue and above the red.
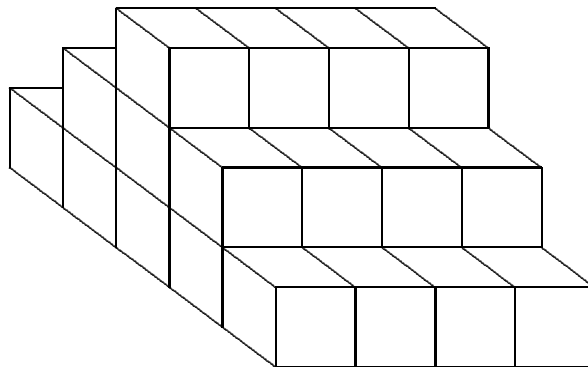Which colour is the bottom block?

(A) red   (B) green   (C) blue
     (D) orange   (E) purple

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

26. Some steps are built using 36 wooden blocks as shown in the diagram.

All the faces on the outside except the bottom ones are painted blue. How many blocks do not get any of their faces painted?

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27. In the year 5 classroom, the desks are arranged in equal rows. Phil sits at the desk that is fourth from the front and third from the back. There are four desks on the right of Phil's desk but only one to the left. How many desks are there in the room?

28. A carpenter made 20 chairs and stools with a total number of 73 legs.

If the chairs each have 4 legs and the stools each have 3 legs, how many chairs did she make?

29. Lisa collected 50 seashells over a period of five days. Each day she collected three more than she had collected the day before. How many shells did she collect on the fifth day?

30. An apartment block has a number of square apartments and a number of square gardens. Apartments must have at least one window, either to the outside or to a garden. In figure 1, one apartment has a window to an internal garden G, and ten have windows to the outside.
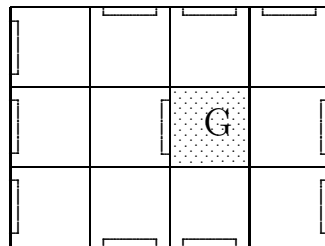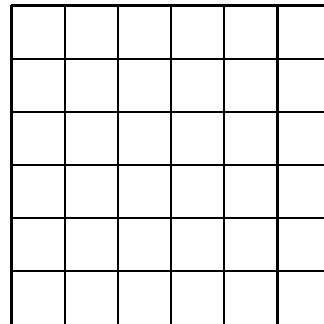

figure 1

figure 2

What is the smallest number of gardens needed for an apartment block built on a 6 × 6 square, as in figure 2, so that each apartment has a window to the outside or to an internal garden?

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