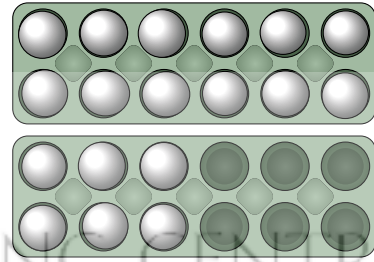




Middle Primary Division

Questions 1 to 10, 3 marks each

1. How many eggs are in these cartons?
(A) 12 (B) 15 (C) 16
(D) 18 (E) 21



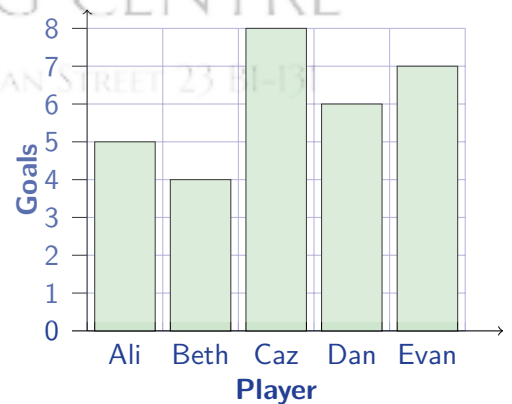
2. Which one of the following is the largest number?
(A) 401 (B) 410 (C) 14 (D) 140 (E) 44

3. Which of the following is equal to 3 m?
(A) 3 cm (B) 30 cm (C) 300 cm (D) 3000 cm (E) 36 cm

4. A bowl has 8 peaches. After the children take one each, there is one peach left. How many children are there?
(A) 5 (B) 6 (C) 7
(D) 8 (E) 9



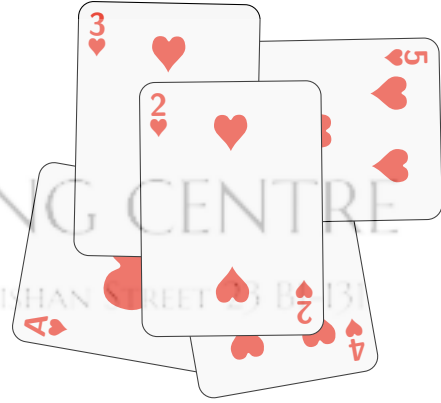
5. A *Runnyball* team has 5 players. This graph shows the number of goals each player scored in a tournament. Who scored the second-highest number of goals?
(A) Ali (B) Beth (C) Caz
(D) Dan (E) Evan





6. The next counting number after 1089 is
 (A) 1090 (B) 10810 (C) 1910 (D) 1900 (E) 1009

7. These cards were dropped on the table, one at a time.
 In which order were they dropped?

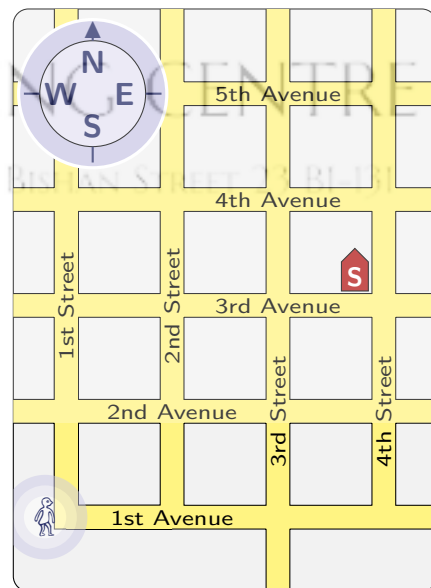


- (A) 4♥ A♥ 5♥ 3♥ 2♥
 (B) A♥ 4♥ 5♥ 3♥ 2♥
 (C) 2♥ 4♥ A♥ 3♥ 5♥
 (D) A♥ 2♥ 3♥ 4♥ 5♥
 (E) 2♥ 3♥ 4♥ 5♥ A♥

8. The table shows the pets six children own.
 Which boy owns a dog?
 (A) Alex (B) Chris (C) Finn
 (D) Jo (E) Teejay

	Cat	Dog	Fish
Girls	Chris	Jo	Sam
Boys	Teejay	Finn	Alex

9. Sophia is at the corner of 1st Street and 1st Avenue. Her school is at the corner of 4th Street and 3rd Avenue.
 To get there, she walks
 (A) 4 blocks east, 3 blocks north
 (B) 3 blocks west, 4 blocks north
 (C) 4 blocks west, 2 blocks north
 (D) 3 blocks east, 2 blocks north
 (E) 2 blocks north, 2 blocks south

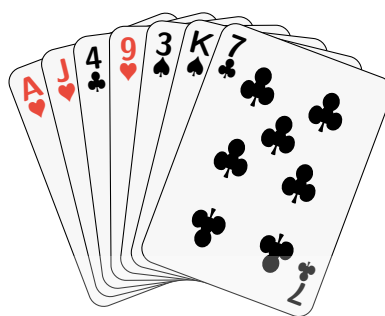




10. Jake is playing a card game, and these are his cards.

Elena chooses one card from Jake at random.

Which of the following is Elena most likely to choose?



- (A) a heart (♥) (B) a diamond (♦) (C) a spade (♠)
(D) a picture card (J, Q or K) (E) an even-numbered card

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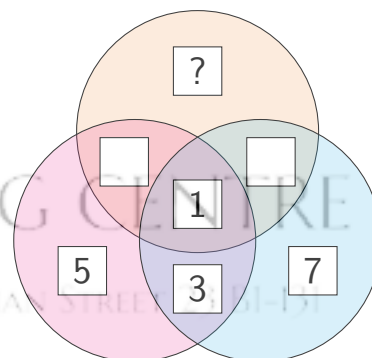
Questions 11 to 20, 4 marks each

11. In Jacqui's puzzle, a number is put in each box.

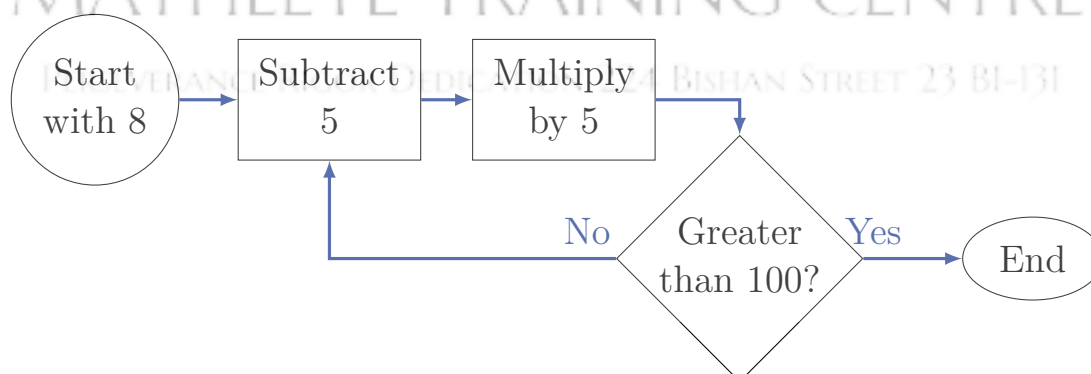
In each circle, the four numbers must add to 13.

Which number goes in the top box?

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



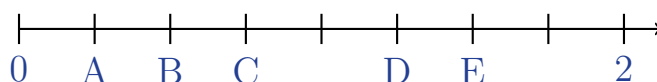
12. Noah follows the instructions in this flow chart. What number does he end with?



- (A) 120 (B) 150 (C) 200 (D) 225 (E) 250



13. On this number line, where would the number $\frac{1}{2}$ be?



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

14. When Bessie puts a mirror next to her calculator, the digits sometimes spell words in the mirror.

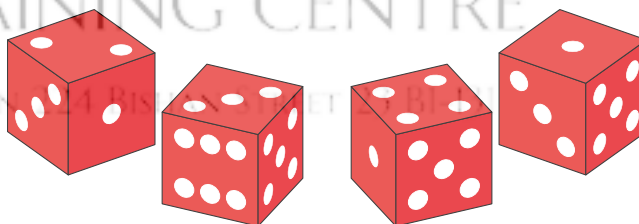
Which number spells 'BESSIE' in the mirror?

- (A) 315538 (B) 835513
(C) 832213 (D) 815312
(E) 312238



15. Looking at this view of four dice, how many dots cannot be seen?

- (A) 21 (B) 28 (C) 32
(D) 36 (E) 45



16. A pencil costs 25 cents and a ruler costs 80 cents.

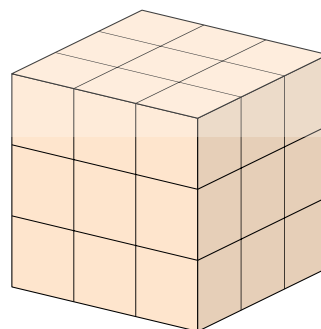
With \$5 I bought one ruler and as many pencils as I could afford. What change did I get?

- (A) 25 cents (B) 20 cents (C) 15 cents (D) 10 cents (E) 5 cents

17. 27 identical cubes are used to make this $3 \times 3 \times 3$ cube.

How many more are needed to make a $4 \times 4 \times 4$ cube?

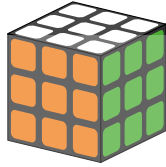
- (A) 1 (B) 25 (C) 27
(D) 36 (E) 37



18. Meena has a \$50 gift voucher to spend in a toyshop, but they won't give change from the voucher. Here is a short list of toys she would like. She tried to spend as much of the \$50 as possible.



\$24



\$14



\$6

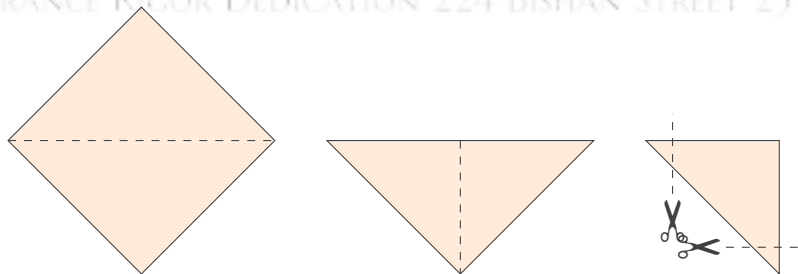


\$39

If she buys no more than one of each toy, how much of the voucher will not get used?

- (A) \$1 (B) \$3 (C) \$5 (D) \$7 (E) \$9

19. A square piece of paper is folded twice along its diagonals, as shown in the diagram. Two corners are then cut off. When the paper is unfolded, what will it look like?



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



20. It takes Preeti 30 minutes to walk to school. Sometimes she goes on her bike and she cycles twice as fast as she walks. Occasionally, her mother takes her in the car, which goes three times as fast as her bike. How many minutes does it take to get to school in the car?
- (A) 2 (B) 4 (C) 5 (D) 10 (E) 15

MATHLETE TRAINING CENTRE

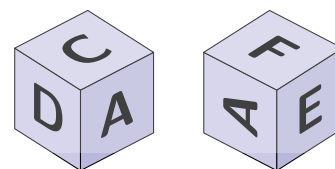
Questions 21 to 25, 5 marks each

21. In my dance class, 14 students are taller than Bob, and 12 are shorter than Alice. Four students are both shorter than Alice and taller than Bob. How many students are in my dance class?
- (A) 22 (B) 24 (C) 26 (D) 28 (E) 30

22. My sister and I are playing a game where she picks two counting numbers and I have to guess them. When I tell her a number, she multiplies my number by her first number and then adds her second number. When I say 15, she says 50. When I say 2, she says 11. If I say 6, what should she say?
- (A) 23 (B) 27 (C) 35 (D) 41 (E) 61

23. A year 6 student saved 100 cents in 5 days, each day saving 5 cents more than the previous day. How many cents did she save on the fifth day?
- (A) 20 cents (B) 25 cents (C) 30 cents (D) 40 cents (E) 50 cents

24. A cube has the letters A, M, C, D, E and F on its six faces. Two different views of the cube are shown.

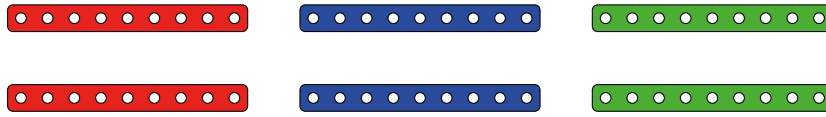


I place the cube on the table so that the front shows **C**. If I look at the back of the cube, what will I see?

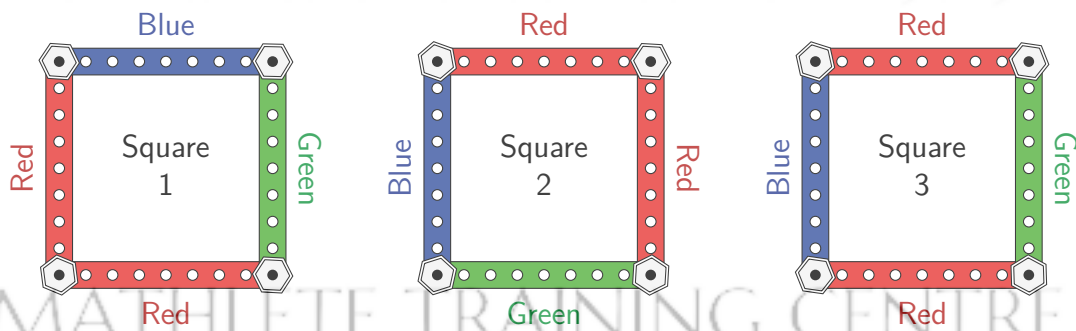
- (A) **D** (B) **E** (C) **L** (D) **W** (E) **F**



25. Shirley has six pieces of her construction kit: two red, two blue and two green. She wants to build a square using four of the pieces.



Shirley considers Square 1 below to be the same as Square 2, since the colours match once Square 2 is turned over and rotated. However she considers Square 3 to be different from Square 1, since no matter how it is turned, the two red sides are always opposite, and cannot match Square 1.



How many different squares could she build?

- (A) 4 (B) 8 (C) 12 (D) 16 (E) 18

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

Questions 26–30 are worth 6, 7, 8, 9 and 10 marks, respectively.

26. At my local greengrocer, you take a ticket from the machine and wait until your number is called. The roll of tickets goes from 000 up to 999. When I was there last week with my neighbour, we took two tickets in a row and our two numbers added to 777. What was the next ticket number after ours?





27. There are 390 children at a summer camp. One-third of the number of girls is equal to one-half of the number of boys. How many girls are there?

28. How many of the numbers from 100 to 999 have exactly one zero digit?

MATHLETE TRAINING CENTRE

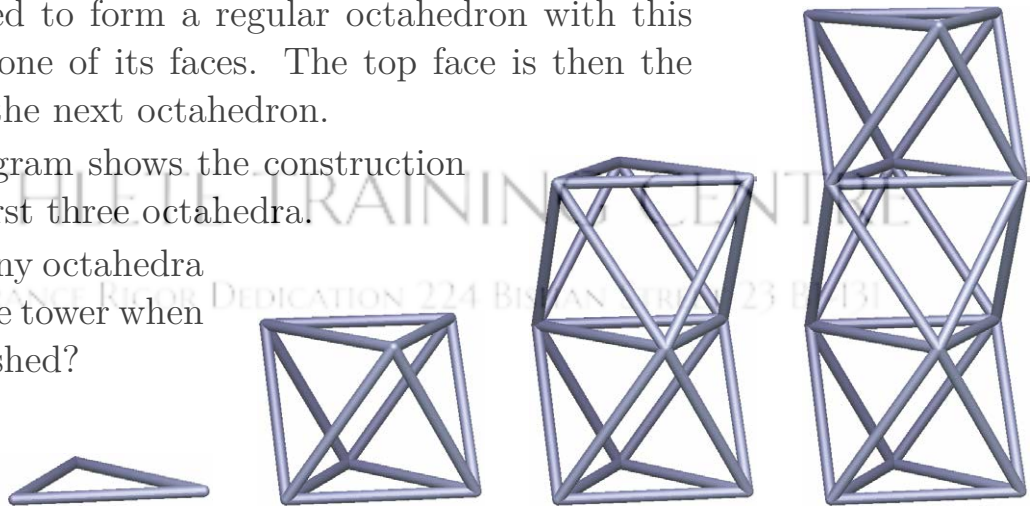
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29. A tower is built from exactly 2019 equal rods.

Starting with 3 rods as a triangular base, more rods are added to form a regular octahedron with this base as one of its faces. The top face is then the base of the next octahedron.

The diagram shows the construction of the first three octahedra.

How many octahedra are in the tower when it is finished?



MATHLETE TRAINING CENTRE

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30. John is one year older than his wife Mary. They have three children, whose ages are two years apart.

The product of John and Mary's ages is less than 2019. The product of the three children's ages is also less than 2019.

Next year both these products will be greater than 2020.

This year, what is the sum of all five ages?