

Mathematica Centrum

Together, let's shape the mathematicians of the future

THALES PREPARATORY TEST 2012

1. The value of X in the equation: $X - 2 = 23$ is

- A) 21 B) 23 C) 22 D) 25 E) 24

2. Which number is twelve less than two hundred seven

- A) 195 B) 207 C) 197 D) 214 E) 277

3. The number of edges of a cube multiplied by the number of faces of a cube is equal to

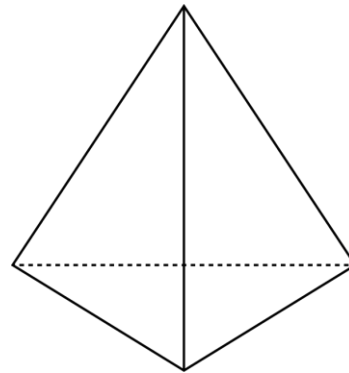
- A) 18 B) 60 C) 48 D) 66 E) 72

4. If each bag has 10 chocolates, how many chocolates are there, in total, in 8 bags?

- A) 18 B) 80 C) 90 D) 40 E) 75

5. The number of faces plus the number of vertices of the pyramid is equal to

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



6. The largest 4-digit even number that can be written with the digits 1, 8, 6, and 4 is

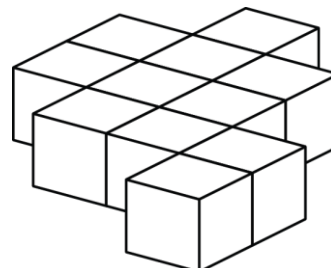
- A) 8 641 B) 6 814 C) 8 614
D) 4 681 E) 1 468

7. The missing number in the sequence: 3 500, 3 250, ?, 2 750, 2 500 is

- A) 3 000 B) 3 150 C) 3 125
D) 3 200 E) 3 175

8. Eleven blocks have been glued together as shown in the diagram. How many faces of these blocks have no glue on them?

- A) 40 B) 42 C) 44
D) 38 E) 46



9. 16 quarters = ? dimes

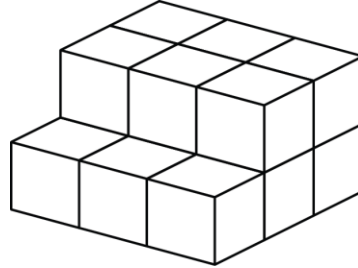
- A) 25 B) 30 C) 40 D) 45 E) 50

10. Write the following 5 numbers: 3 782, 2 863, 1 935, 2 926, 3 931 in increasing order (from the smallest to largest). The fourth number written is

- A) 3 782 B) 2 863 C) 3 931
D) 1 935 E) 2 926

11. What number is 10 more than the number that is 10 times smaller than 10?

- A) 21 B) 10 C) 11
D) 20 E) 12



12. How many blocks are in the pile?

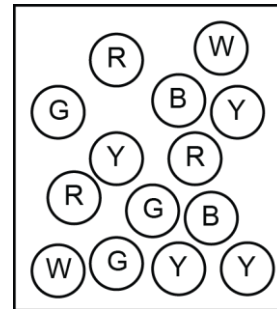
- A) 11 B) 12 C) 13 D) 14 E) 15

13. 11 hundreds - 280 + 14 tens = ?

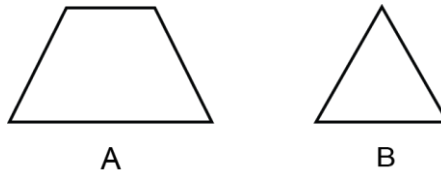
- A) 960 B) 1 020 C) 980 D) 1 050 E) 950

14. Without looking, Mathew picks one marble from the box. What colour (Red, Green, Yellow, Black or White) is Mathew most likely to choose?

- A) Red B) Green C) Yellow
D) Black E) White



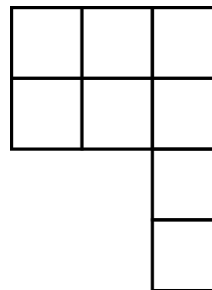
15. The sum of the number of lines of symmetry of figure A and of figure B is equal to



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

16. How many 3-digit numbers can you form if you use the 3 following digits: 0, 1, and 2 only once?

- A) 4 B) 5 C) 6
D) 7 E) 3

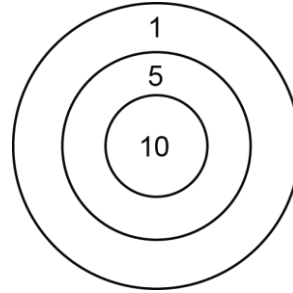


17. The figure shown is made of 8 small squares. The side of each small square is 1 cm long. What is the perimeter of this figure?

- A) 17 cm B) 13 cm C) 16 cm
D) 14 cm E) 15 cm

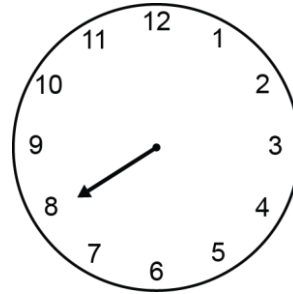
18. A target is composed of 3 distinct areas. When hit, the areas are worth 1, 5, or 10 points. Mathusalem hit the target 8 times and scored 38 points. How many times did he hit the 5-point area?

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



19. The clock shown in the diagram has just lost its minute hand. What is the approximate time it lost it?

- A) 7:30 B) 7:32 C) 7:28
D) 7:55 E) 7:40



20. How many odd numbers are there between 80 and 180?

- A) 49 B) 51 C) 50
D) 52 E) 100

21. A 2-digit natural number is added to a 3-digit natural number. The sum could be

- A) 78 B) 1 100 C) 98 D) 109 E) 777