

# 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

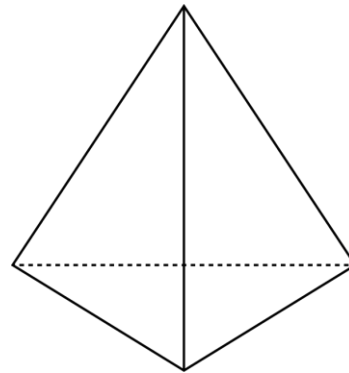
- A) 18                      B) 60                      C) 48                      D) 66                      E) 72

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

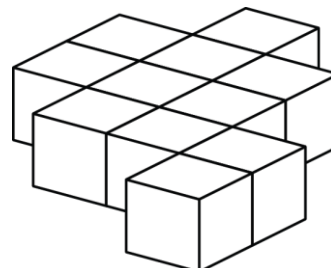
- A) 8 641                      B) 6 814                      C) 8 614  
D) 4 681                      E) 1 468

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

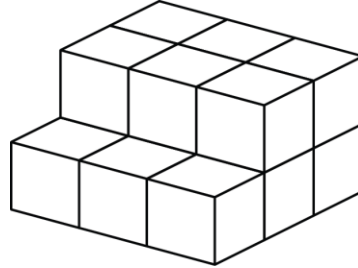
- A) 25                      B) 30                      C) 40                      D) 45                      E) 50

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?

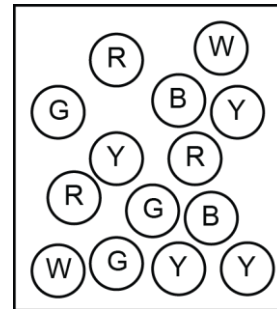
- A) 11                      B) 12                      C) 13                      D) 14                      E) 15

13. 11 hundreds - 280 + 14 tens = ?

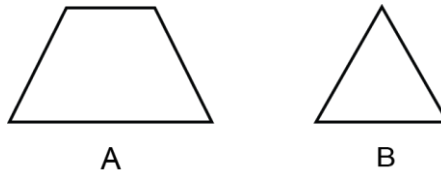
- A) 960                      B) 1 020                      C) 980                      D) 1 050                      E) 950

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



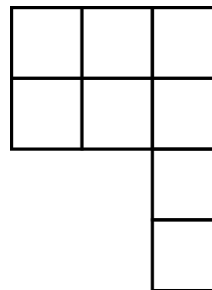
15. The sum of the number of lines of symmetry of figure A and of figure B is equal to



- 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

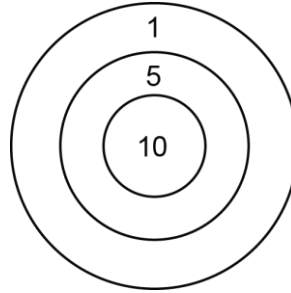


17. The figure shown is made of 8 small squares. The side of each small square is 1 cm long. What is the perimeter of this figure?

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

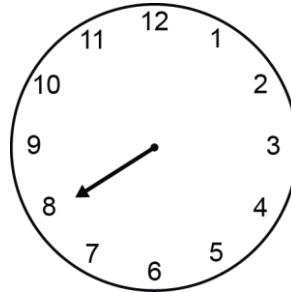
18. A target is composed of 3 distinct areas. When hit, the areas are worth 1, 5, or 10 points. Mathusalem hit the target 8 times and scored 38 points. How many times did he hit the 5-point area?

- 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