

Mathematica Centrum

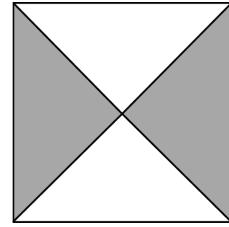
Together, let's shape the mathematicians of the future

THALES PREPARATORY TEST 2015

- The number of vertices plus the number of edges of a pentagonal prism is equal to
A) 12 B) 25 C) 10 D) 14 E) 13
- $2 + 7 + 3 + 8 = ?$
A) 18 B) 20 C) 21 D) 10 E) 19
- Which of the following is not even?
A) 2×3 B) 3×8 C) 3×5 D) $3 \times 2 \times 4$ E) $2 \times 3 \times 5$
- $(1 + 2 + 3 + 4 + 5) - (4 + 3 + 2 + 1) = ?$
A) 6 B) 3 C) 4 D) 5 E) 2
- A number multiplied by 6 gives 48. When the same number is tripled, the result is
A) 15 B) 21 C) 27 D) 18 E) 24
- The one's digit of the sum of $3 + 5 + 7 + 9$ is
A) 4 B) 5 C) 24 D) 2 E) 3
- The number of multiples of 5 between 10 and 30 is equal to
A) 7 B) 6 C) 5 D) 4 E) 3
- A quarter of an hour + half an hour + 1 hour is equal to
A) 108 minutes B) 105 minutes C) 115 minutes D) 110 minutes E) 100 minutes
- Twice a number minus the same number is equal to 10. What is the number?
A) 9 B) 11 C) 12 D) 10 E) 8
- The largest 3-digit even number that can be formed using the digits 7, 5, and 4 only once is
A) 754 B) 745 C) 457 D) 574 E) 475

11. What fraction of the square is shaded?

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



12. If April 3 is a Monday, which of the following shows the dates of all Saturdays in the month of April?

- A) 1, 8, 15, 22, 29 B) 3, 10, 17, 24 C) 1, 8, 15, 23, 30
D) 8, 15, 22, 29 E) 1, 8, 14, 21, 28

13. If you add 1 hundred + 2 tens + 26 ones to the number 121, the result will be

- A) 266 B) 270 C) 269 D) 268 E) 267

14. The number of seconds in 2 minutes is

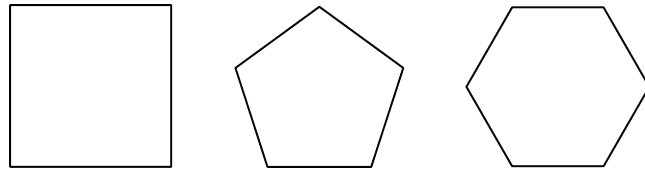
- A) 120 B) 180 C) 60 D) 30 E) 90

15. A rope 50 cm long is cut into 5 equal pieces. The length of each piece is

- A) 20 dm B) 10 dm
C) 25 cm D) 2 dm
E) 10 cm

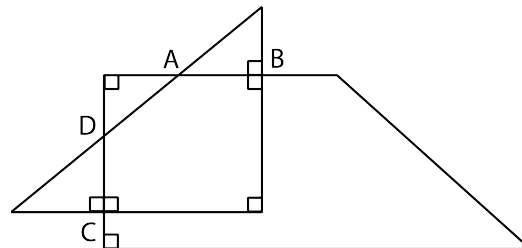
16. The number of lines of symmetry in a square plus the number of lines of symmetry in a regular pentagon plus the number of lines of symmetry in a regular hexagon is equal to

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



17. A right-angled triangle and a right-angled trapezium intersect at points A, B, C, and D as shown in the diagram. The number of acute angles plus the right angles shown in this diagram is equal to

- A) 12 B) 13 C) 14 D) 15 E) 16

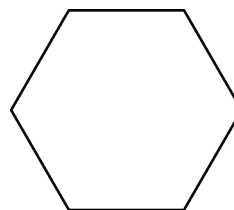


18. The next number in the sequence: 30, 25, 21, 18, 16, ... is

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

19. The sum of $1 + 2 + 3 + 4 + 5 + 6$ is divisible by

- A) 5 B) 6 C) 7
D) 8 E) 9



20. What is the minimum number of triangles needed to form the hexagon in the diagram?

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