

Mathematica Centrum

Together, let's shape the mathematicians of the future

THALES PREPARATORY 2019

1. The missing number in the equation: $8 \times 3 = 4 \times ?$ is

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

2. The sum of $8 + 50 + 200 + 6\,000$ is

- A) 6 258 B) 6 558 C) 6 858 D) 6 238 E) 6 458

3. The value of $(15 \div 3) \times (16 - 9)$ is a multiple of

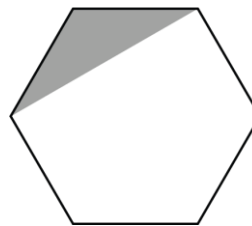
- A) 2 B) 3 C) 4 D) 5 E) 6

4. 20 nickels = ? quarters.

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

5. What fraction of the hexagon is shaded?

- A) $\frac{1}{6}$ B) $\frac{1}{5}$ C) $\frac{1}{4}$
D) $\frac{1}{3}$ E) $\frac{1}{2}$

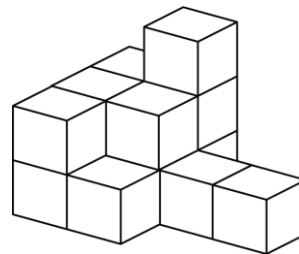


6. A natural number is multiplied by 7.
The result could not be

- A) 42 B) 56 C) 88
D) 49 E) 63

7. How many blocks are there in the pile?

- A) 10 B) 11 C) 12
D) 13 E) 14



8. If the last day of January is a Wednesday,
then January 11 was a

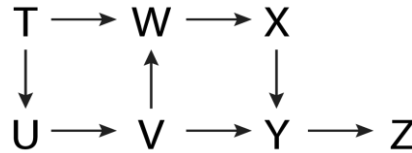
- A) Wednesday B) Thursday C) Friday D) Saturday E) Sunday

9. When twice 100 is multiplied by one quarter of 12, the result is

- A) 150 B) 300 C) 600 D) 200 E) 250

10. 10 dm = ? m

- A) 100 B) 20 C) 5
D) 10 E) 1



11. T, U, V, W, X, Y, and Z are players that participated in a chess tournament. $T \rightarrow U$ means that T has won a game against U. How many players have not won a single game?

- A) 0 B) 1 C) 2 D) 3 E) 4

12. A 2-digit natural number is multiplied by a 2-digit natural number. The product could be a natural number that has

- A) 4 digits B) 6 digits C) 5 digits D) 7 digits E) 2 digits

13. Which of the following expressions is the largest?

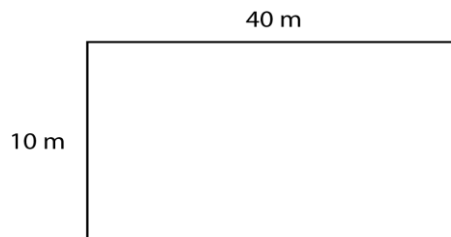
- A) 3! B) 4! C) 5! D) 2! x 3!! E) 6!

14. A jar is full of old pennies, nickels, dimes, and quarters. Andrea removes 7 coins having a total value of 82¢. How many dimes did she remove?

- A) 0 B) 1 C) 2 D) 3 E) 4

15. A rectangular piece of land measures 40 m x 10 m. If both its length and its width increase by 5 m, then its perimeter will increase by

- A) 18 m B) 20 m C) 16 m
D) 14 m E) 22 m



16. I weigh 20 kg more than half of my weight. How many kilograms do I weigh?

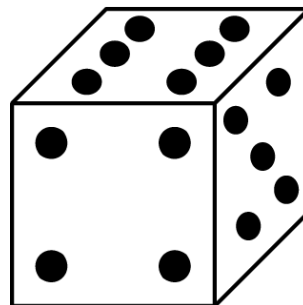
- A) 42 kg B) 48 kg C) 40 kg D) 44 kg E) 46 kg

17. If you could spend \$1 every second, how much could you spend in a minute?

- A) \$50 B) \$58 C) \$60 D) \$72 E) \$24

18. A die is rolled once. What is the probability of getting a 6?

- A) 3/6 B) 1/6 C) 2/6
D) 4/6 E) 5/6



19. How many even multiples of 3 are there between 0 and 100?

- A) 16 B) 15 C) 18
D) 17 E) 14