

Mathematica Centrum

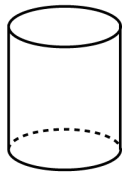
Together, let's shape the mathematicians of the future

BYRON-GERMAIN PREPARATORY TEST 2017

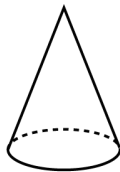
1. $3 + 1 + 6 = ?$

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

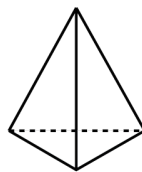
2. Which solid has 4 flat faces, 6 edges and 4 vertices?



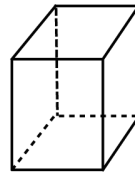
A



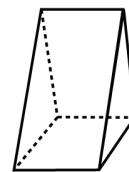
B



C



D



E

3. Which product has the smallest ones digit?

- A) $1 \times 2 \times 3$ B) $3 \times 4 \times 5$ C) $6 \times 7 \times 8$ D) $7 \times 9 \times 11$ E) $9 \times 11 \times 13$

4. $20 \div (7 - 5) = ?$

- A) 10 B) 6 C) 8 D) 12 E) 9

5. How many odd number are there between 19 and 31?

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

6. The value of X in the equation: $512 = 317 + X$ is

- A) 192 B) 193 C) 194 D) 195 E) 196

7. Round 220 to the nearest hundred. The answer is

- A) 100 B) 200 C) 50 D) 150 E) 300

8. 10 nickels = ? quarters.

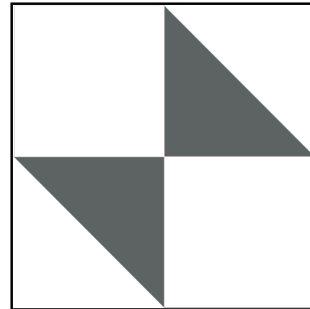
- A) 10 B) 6 C) 3 D) 4 E) 2

9. Andrea counted backwards from 30 by 3's. How many of the following numbers: 8, 12, 14, 21, and 27 were not counted by Andrea?

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

10. An answering machine can store 10 minutes of messages. How many 20 second messages could it store?

- A) 30 B) 20 C) 50
D) 60 E) 40



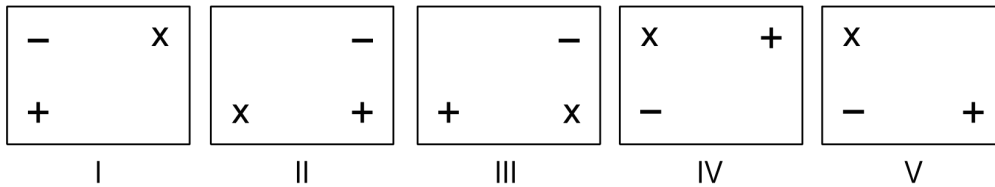
11. How many natural numbers between 7 and 77 are multiples of 7?

- A) 8 B) 9 C) 10
D) 11 E) 12

12. What fraction of the figure is shaded?

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

13. Which two figures are rotation images of each other?

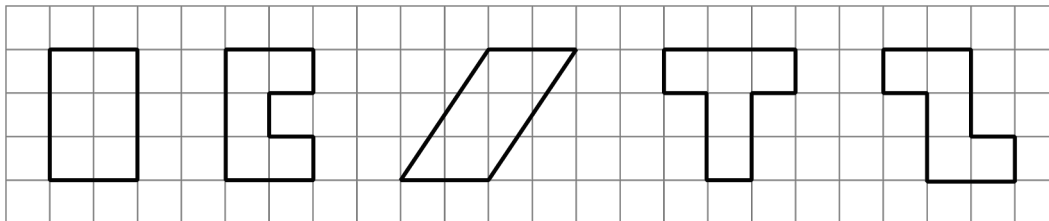


- A) II et III B) II et IV C) I et III D) V et IV E) III et IV

14. 1 dm + 2 cm is equal to

- A) 10 cm B) 8 cm C) 110 mm D) 12 cm E) 90 mm

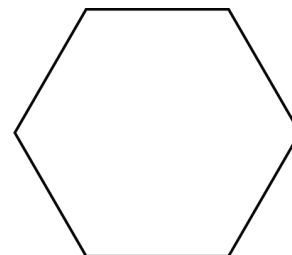
15. Given that the side of a small square is 1, how many of the following have a perimeter of 12?



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

16. The number of lines of symmetry plus the number of diagonals in the diagram opposite is equal to

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

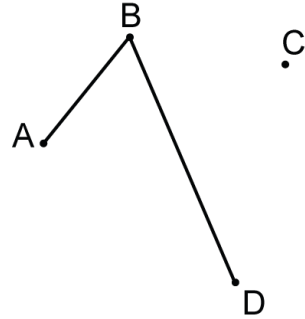


17. How many 4-digit natural numbers between 1 000 and 4 000 have the same digits as 1 234 (including 1 234)?

- A) 10 B) 16 C) 14
D) 18 E) 12

18. How many line segments (like AB and BD) can you draw using the 4 points in the diagram?

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



19. The clock shown in the diagram has just lost its minute hand. At what time, approximately, did it lose it?

- A) 10:30 B) 10:22
C) 10:05 D) 10:00
E) 10:45

