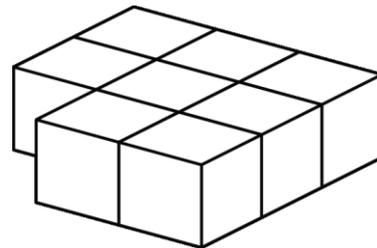


Mathematica Centrum

Together, let's shape the mathematicians of the future

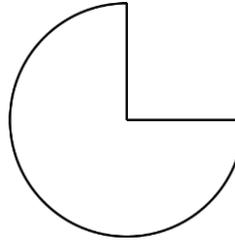
BYRON-GERMAIN PREPARATORY TEST 2026

- The number of vertices of a triangular pyramid is
A) 3 B) 4 C) 5 D) 6 E) 7
- $(3 + 3) \times (2 + 4) = ?$
A) 12 B) 36 C) 10 D) 25 E) 30
- Which number is a multiple of 6?
A) 14 B) 13 C) 24 D) 74 E) 34
- The value of x in the equation $36 - 12 = x + 4$ is
A) 11 B) 10 C) 30 D) 20 E) 36
- The greatest common factor of 10 and 25 is
A) 10 B) 1 C) 5 D) 2 E) 6
- The number of sides + the number of diagonals + the number of lines of symmetry in a square is equal to
A) 9 B) 8 C) 11 D) 10 E) 12
- The product of $25 \times 10 \times 2$ is
A) 100 B) 400 C) 10 000
D) 200 E) 500
- Eight blocks have been glued together as shown in the diagram. How many faces of these blocks have glue on them?
A) 20 B) 24 C) 18
D) 22 E) 16
- Mathew has bought 2ϕ and 3ϕ stamps for a total of 40ϕ . The number of 3ϕ stamps that he has bought could be
A) 5 B) 7 C) 13 D) 10 E) 14



10. The result of $2 \times 7 - 11 \times 1$ is

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



11. What fraction of the pie has not been eaten?

- A) $\frac{3}{4}$ B) $\frac{1}{5}$ C) $\frac{1}{6}$
D) $\frac{1}{7}$ E) $\frac{1}{8}$

12. How many of the following numbers: 1, 2, 3, and 4 are common divisors of 8 and 12?

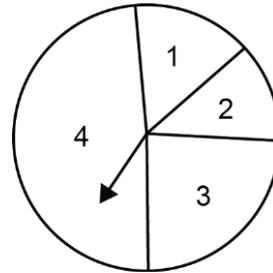
- A) 1 B) 2 C) 3 D) 4 E) 0

13. The value of $20 \text{ mm} + 10 \text{ cm} + 10 \text{ dm}$ is

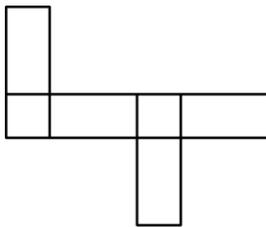
- A) 30 cm B) 11 dm C) 110 mm D) 111 cm E) 112 cm

14. Mathilda has made a circular spinner. If she spins this spinner 100 times, which of the following best represents approximately the number of times she could expect to get a 4?

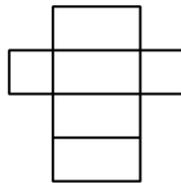
- A) 30 times B) 50 times C) 60 times
D) 40 times E) 20 times



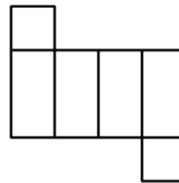
15. How many of the following 4 nets cannot form a rectangular prism?



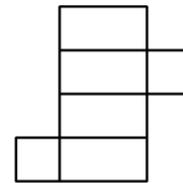
I



II



III



IV

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

16. Each time that Melissa pours 45 ml of water in a beaker, Andrea pours 40 ml in it. The order in which they pour the water in the beaker is given by the sequence: A-M, M-A, A-M, M-A ... (the first time, Andrea pours the water first, followed by Melissa, the second time, Melissa pours the water first, followed by Andrea and so on as determined by the sequence). How many times can Andrea pour the 40 ml of water completely in the 1 000 ml beaker without the water overflowing?

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

17. When a natural number is divided by 6, the remainder is odd. This number could be

- A) 14 B) 36 C) 43 D) 50 E) 16

18. The product of 3 consecutive natural numbers is 504. The cube of the largest is equal to
- A) 343 B) 729 C) 512 D) 816 E) 820
19. Mathilda leaves from her home. She travels 2 km north, 3 km east, 3 km south, and finally 3 km west. At what distance from her home does she end her journey?
- A) 3 km B) 4 km C) 2 km D) 0 km E) 1 km
20. A fence surrounds a piece of land that is a perfect square. If the perimeter of the fence is 256 m, what is the length of one of its sides?
- A) 46 m B) 54 m C) 56 m D) 66 m E) 64 m
21. Mathew waxes a car 2 times faster than Andrea. If Andrea takes 24 minutes to wax the car, how much time will they take together to wax the same car?
- A) 9 minutes B) 8 minutes C) 12 minutes D) 11 minutes E) 10 minutes
22. The ones digit of the following product: $12 \times 11 \times 10 \times 9 \times 8$ is
- A) 0 B) 1 C) 4 D) 3 E) 2