BRITISH COLUMBIA SECONDARY SCHOOL MATHEMATICS CONTEST, 2026

Junior Final, Part A

May 1, 2026

1. A book has n pages. If 1392 digits are needed to number the pages from 1 to n, how many pages are in the book?

   (A) 497 (B) 498 (C) 499 (D) 500 (E) 501

2. Six straight lines are drawn in the plane with no two being parallel and no three intersecting at the same point. The number of regions into which the plane is divided is:

   (A) 16 (B) 20 (C) 22 (D) 24 (E) 26

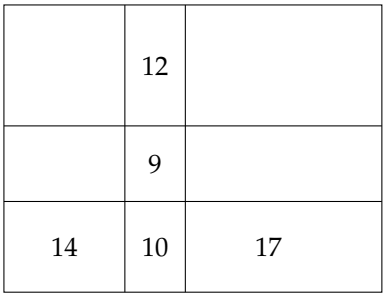
3. As a number of passengers enter an empty streetcar, exactly $2/7$ of them took seats. At the next stop, the number of passengers increased exactly by 15%. Find the number of passengers who entered at the start, given that the streetcar can hold at most 180 passengers.

   (A) 70 (B) 133 (C) 140 (D) 154 (E) 168

4. Suzanne and her father share a birthday. This year, they notice that if they reverse the digits of Suzanne's age, they get her father's age (and vice versa). Assuming they are both under 90 years of age, what is one of the possible age differences between Suzanne and her father?

   (A) 24 (B) 27 (C) 29 (D) 33 (E) 38

5. A rectangle is subdivided into nine smaller non-overlapping rectangles by two pairs of parallel lines. The number inside a small rectangle denotes its perimeter. Find the perimeter of the larger rectangle.



   (A) 42 (B) 44 (C) 48 (D) 50 (E) 54

6. In a chess tournament every competitor played exactly one game against each other opponent. Each competitor scored 1 point for a win, 0.5 points for a draw, and 0 points for a loss in a game. It is known that the winner beat all her opponents, and her score was $\frac{1}{5}$ of the sum of the scores of all the rest of the competitors. How many competitors were in the tournament?

   (A) 8 (B) 10 (C) 11 (D) 12 (E) 14

7. Let x, y and z be three different positive whole numbers. Find the largest possible difference between the sum

$$\frac{1}{x}+\frac{1}{y}+\frac{1}{z}$$

and the sum

$$\frac{1}{x+1}+\frac{1}{y+2}+\frac{1}{z+3}.$$

(A) $\frac{11}{12}$ (B) $\frac{21}{20}$ (C) $\frac{13}{15}$ (D) $\frac{5}{4}$ (E) $\frac{13}{12}$

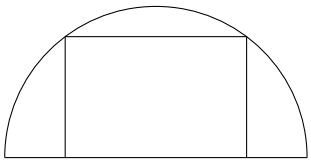
8. The absolute value of a number a, denoted $|a|$, is the distance from the number a to 0 in the real line. For example, $|7.5| = 7.5$, $|0| = 0$ and $|-2| = 2$.

How many ordered pairs of integers (x, y) satisfy the following inequality?

$$|x| + |y| < 2026$$

(A) 2025 (B) 4051 (C) 2,049,301 (D) 8,205,301 (E) 12,295,801

9. In the figure the radius of the semicircle is 1.



The maximum area of the rectangle is

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

10. A fly is sitting on the ceiling of a rectangular room. The distances from the fly to the three closest corners on the floor are 3m, 4m and 5m. Find the distance from the fly to the fourth corner on the floor.

(A) 8 (B) $2\sqrt{10}$ (C) 6 (D) $5\sqrt{3}$ (E) $4\sqrt{2}$