Geometry Challenge

Choose one answer per question. Circle A, B, C, or D.

1. An angle measures exactly 90 degrees. How should it be classified?
   A. Right
   B. Acute
   C. Obtuse
   D. Straight

2. How long is the perimeter of a square with side length 7 cm?
   A. 21 cm
   B. 14 cm
   C. 28 cm
   D. 49 cm

3. A rectangle covers a width of 6 meters and a length of 11 meters. What is its area?
   A. 17 square meters
   B. 66 square meters
   C. 34 square meters
   D. 72 square meters

4. A circle has a radius of 8 cm. What is its diameter?
   A. 24 cm
   B. 4 cm
   C. 8 cm
   D. 16 cm

5. Which point lies on the vertical axis?
   A. (5, 0)
   B. (0, −5)
   C. (−5, 4)
   D. (4, 5)

6. Two angles of a plane triangle measure 44° and 67°. What is the third angle?
   A. 69°
   B. 67°
   C. 79°
   D. 111°

7. What is the area of a triangle with base 14 cm and perpendicular height 9 cm?
   A. 126 square centimeters
   B. 46 square centimeters
   C. 108 square centimeters
   D. 63 square centimeters

8. What is the exact circumference of a circle with diameter 13 cm?
   A. 26π cm
   B. 6.5π cm
   C. 13π cm
   D. 169π cm

9. A box measures 12 cm by 5 cm by 4 cm inside. What is its internal volume?
   A. 240 cubic centimeters
   B. 120 cubic centimeters
   C. 196 cubic centimeters
   D. 248 cubic centimeters

10. The two shorter sides of a right triangle are 8 m and 15 m. How long is its hypotenuse?
   A. 23 m
   B. 19 m
   C. 21 m
   D. 17 m

11. A 12 by 9 meter rectangular floor loses a 4 by 3 meter rectangular corner. What is the remaining area?
   A. 102 square meters
   B. 90 square meters
   C. 96 square meters
   D. 120 square meters

12. A rectangle's length is triple its width. If the perimeter is 48 cm, what is the area?
   A. 72 square centimeters
   B. 108 square centimeters
   C. 96 square centimeters
   D. 144 square centimeters

13. A rectangular garden's corners include (−2, 1), (−2, 6) and (4, 6). If each grid unit represents 1 meter, what is the garden's area?

A. 36 square meters
B. 11 square meters
C. 22 square meters
D. 30 square meters

14. A cube has the same volume as a rectangular box measuring 2 cm by 4 cm by 8 cm. How long is a cube edge?

A. 4 cm
B. 6 cm
C. 8 cm
D. 16 cm

15. A 24 m by 10 m courtyard needs a path along its diagonal. Each package covers 4 m of path. What is the smallest number of packages that covers the entire diagonal?

A. 8
B. 6
C. 7
D. 9