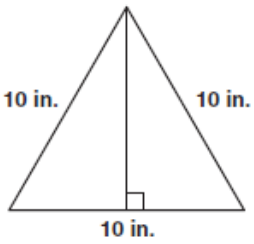
Geometry CST Mixed Review C Name_____

SHOW WORK. NO CALCULATORS!

31. **46** What is the area, in square inches (in.), of the triangle below?



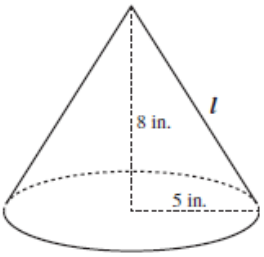
A 25

B $25\sqrt{3}$

C 50

D $50\sqrt{3}$

32. **33** A right circular cone has radius 5 inches and height 8 inches.



What is the lateral area of the cone? (Lateral area of cone $= \pi rl$, where l = slant height)

A 40π sq in.

B 445π sq in.

C $5\pi\sqrt{39}$ sq in.

D $5\pi\sqrt{89}$ sq in.

33. **48** The perimeters of two squares are in a ratio of 4 to 9. What is the ratio between the areas of the two squares?

A 2 to 3

B 4 to 9

C 16 to 27

D 16 to 81

34. **39** A classroom globe has a diameter of 18 inches.

Which of the following is the approximate surface area, in square inches, of the globe? (Surface Area $= 4\pi r^2$)

A 113.0

B 226.1

C 254.3

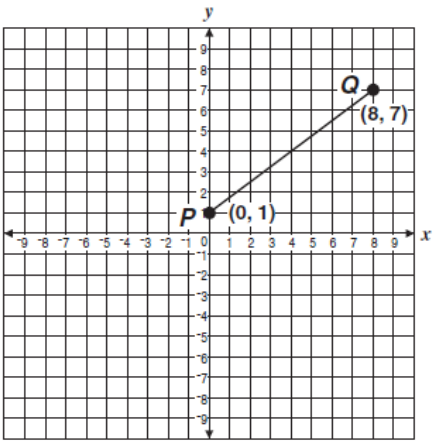
D 1017.4

35. **49** Lea made two candles in the shape of right rectangular prisms. The first candle is 15 cm high, 8 cm long, and 8 cm wide. The second candle is 5 cm higher but has the same length and width. How much additional wax was needed to make the taller candle?

A 320 cm^3 C 960 cm^3

B 640 cm^3 D 1280 cm^3

36. **73** What is the length of line segment $\overline{PQ}$ shown below?



A 9 units

B 10 units

C 13 units

D 14 units

37. **71** What type of triangle is formed by the points $A(4,2)$, $B(6,-1)$, and $C(-1,3)$?

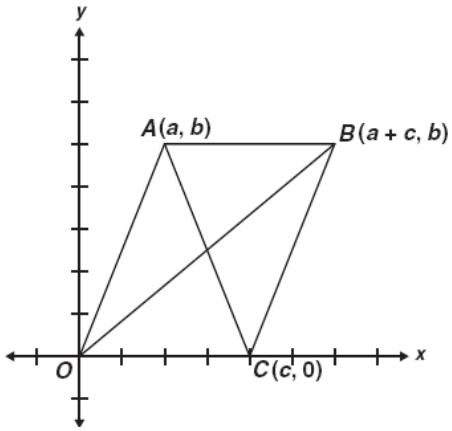
A right

B equilateral

C isosceles

D scalene

38. **70** Figure $ABCO$ is a parallelogram.

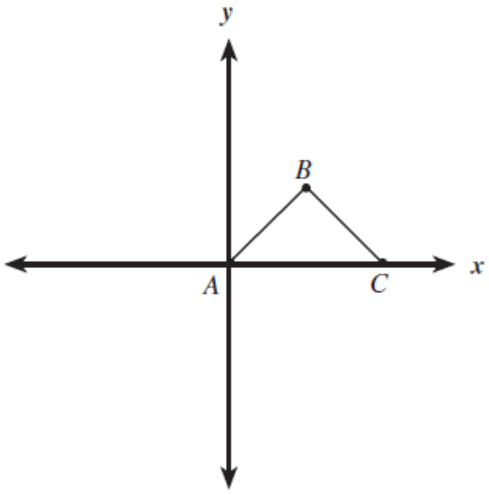


What are the coordinates of the point of intersection of the diagonals?

A $\left(\frac{a}{2}, \frac{b}{2}\right)$ C $\left(\frac{a+c}{2}, \frac{b}{2}\right)$

B $\left(\frac{c}{2}, \frac{b}{2}\right)$ D $\left(\frac{a+c}{2}, \frac{a+b}{2}\right)$

39. **69** The diagram shows $\triangle ABC$.



Which statement would prove that $\triangle ABC$ is a right triangle?

A $(\text{slope } \overline{AB})(\text{slope } \overline{BC}) = 1$

B $(\text{slope } \overline{AB})(\text{slope } \overline{BC}) = -1$

C distance from A to B = distance from B to C

D distance from A to B = – (distance from B to C)