

PRACTICE QUIZ 1

1. The bottom of a plastic pool has an area of 64 square feet. What is the radius to the nearest tenth of a foot? Use 3.14 for π .
 - A. 2.3
 - B. 4.5
 - C. 6.9
 - D. 10.2
2. The area of a circular hand mirror is 200 square centimeters. Find the circumference of the mirror to the nearest tenth of a centimeter. Use 3.14 for π .
 - A. 25.1
 - B. 50.2
 - C. 75.3
 - D. 100.4
3. The circumference of a pie is 300 centimeters. Find the area of one-fourth of the pie to the nearest tenth of a square centimeter. Use 3.14 for π .
 - A. 1,793.6
 - B. 2,284.8
 - C. 7,174.4
 - D. 14,348.8
4. A regular hexagon has a rotational order of 6. What is the smallest number of degrees for the figure to be rotated onto itself?
 - A. 30°

B. 60°

C. 90°

D. 120°

5. A right triangle has a base of 6 inches and a hypotenuse of 10 inches. Find the height in inches of the triangle if the area is 24 square inches.

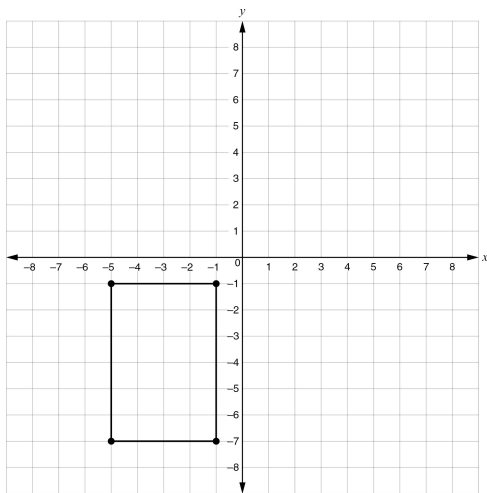
A. 4

B. 6

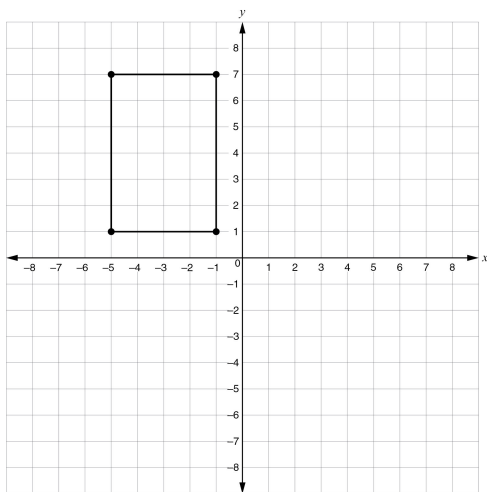
C. 8

D. 10

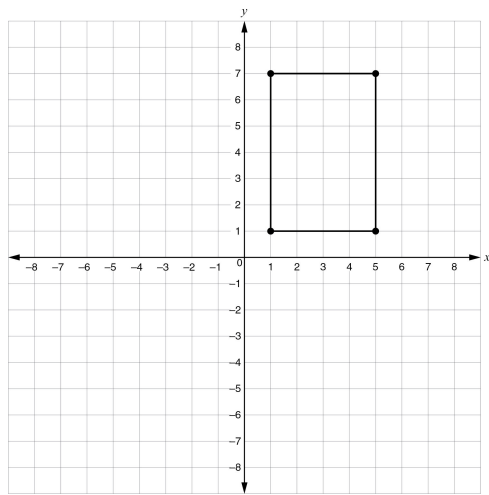
6. Draw a rectangle with the coordinates **(5,7), (5,1), (1,1), (1,7)**.



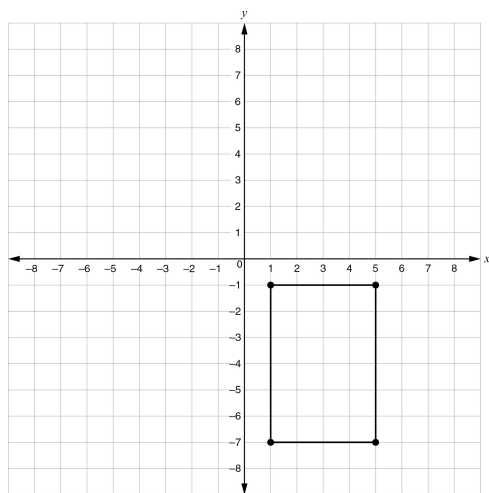
A.



B.



C.



D.

7. The volume of a cone is **28π** cubic inches, and its diameter is 2 inches.

What is the height of the cone?

A. 2 inches

B. 4 inches

C. 6 inches

D. 8 inches

8. A hemi-sphere has a radius of 6 centimeters. Find the volume in cubic centimeters.

A. **72π**

B. **144π**

C. **288π**

D. 576π

9. A rectangular pyramid has a height of 7 meters and a volume of 112 cubic meters. Find the area of the base in square meters.

A. 16

B. 28

C. 42

D. 48

10. A right rectangular prism has dimensions of 3 inches by 6 inches by 9 inches. What is the surface area in square inches?

A. 162

B. 198

C. 232

D. 286

PRACTICE QUIZ 1 – ANSWER KEY

1. B. The correct solution is 4.5 because $A = \pi r^2$; $64 = 3.14 r^2$;
 $20.38 = r^2$; $r \approx 4.5$ feet. See Lesson: Circles.
2. B. The correct solution is 50.2. $A = \pi r^2$; $200 = 3.14 r^2$; $63.69 = r^2$;
 $r \approx 8.0$ centimeters. $C = 2\pi r$; $C = 2(3.14)8.0 \approx 50.2$ centimeters. See Lesson: Circles.
3. A. The correct solution is 1,793.6. $C = 2\pi r$; $300 = 2(3.14)r$;
 $300 = 6.28r$; $r \approx 47.8$ centimeters. $A = \frac{1}{4} \pi r^2 \approx \frac{1}{4}(3.14)(47.8)^2 \approx \frac{1}{4}$
 $3.14(2,284.84) \approx 1793.6$ square centimeters. See Lesson: Circles.
4. B. The correct solution is 60° . For a regular hexagon, divide 360° by the six sides to obtain 60° . See Lesson: Congruence.
5. C. The correct solution is 8. Substitute the values into the formula, $24 = \frac{1}{2}$
 $(6)h$ and simplify the right side of the equation, $24 = 3h$. Divide both sides of the equation by 3, $h = 8$ inches. See Lesson: Similarity, Right Triangles, and Trigonometry.
6. C. All points are in the first quadrant. See Lesson: Similarity, Right Triangles, and Trigonometry.
7. C. The correct solution is 6 inches. Substitute the values into the formula, $2\pi = \frac{1}{3} \pi(1)2h$ and simplify using the right side of the equation by applying the exponent and multiplying, $2\pi = \frac{1}{3} \pi(1)h$, $2\pi = \frac{1}{3} \pi h$. Multiply both sides of the equation by 3 to get a solution of 6 inches. See Lesson: Measurement and Dimension.
8. B. The correct solution is 144π . Substitute the values into the formula and simplify using the order of operations, $V = \frac{2}{3} \pi r^3 = \frac{2}{3} \pi(6^3) = \frac{2}{3} \pi(216)$
 $= 144\pi$ cubic centimeters. See Lesson: Measurement and Dimension.

9. D. The correct solution is 48. Substitute the values into the formula, $112 = \frac{1}{3}B(7)$ and simplify the right side of the equation, $112 = \frac{7}{3}B$. Multiply both sides of the equation by the reciprocal, $B = 48$ square meters. See Lesson: Measurement and Dimension.

10. B. The correct solution is 198. Substitute the values into the formula and simplify using the order of operations, $SA = 2lw + 2lh + 2hw = 2(3)(6) + 2(6)(9) + 2(9)(3) = 36 + 108 + 54 = 198$ square inches. See Lesson: Similarity, Right Triangles, and Trigonometry.

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❖ PSAT Reading Practice Tests:

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