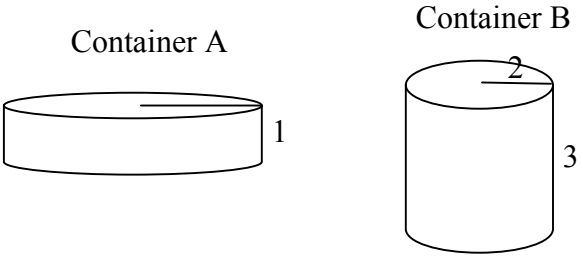
Garden Grove Unified School District
Geometry Quarter 4 Benchmark Review 2009-10

1. **Std 8.0** What is the area of an isosceles trapezoid with a height of 5, non-parallel sides of 6, and bases of 8 and 10?

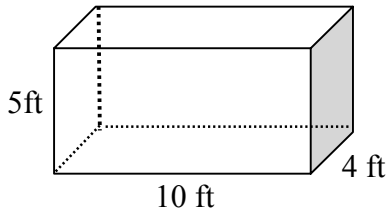
2. **Std 8.0** The circumference of a circle is 40π inches. What is the area of the circle in square inches?

3. **Std 8.0** If a cube has a volume of 125 cm^3, what is the total surface area of the cube?

4. **Std 8.0** The two containers shown below hold the same amount of sugar. What is the radius of container A?



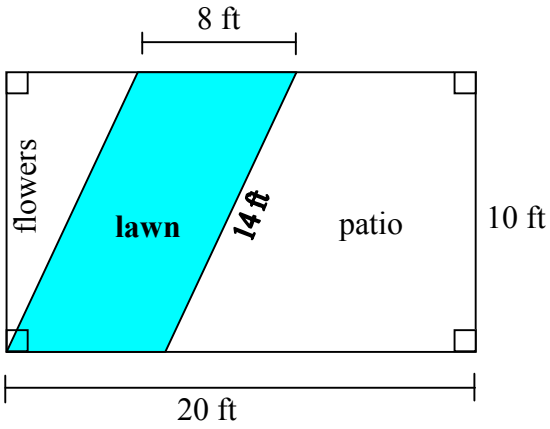
5. **Std 8.0** What is the (a) lateral area of the rectangular prism shown in square feet? (The Base is the rectangle with dimensions of 10 ft. x 4 ft.) (b) What is the surface area? (c) What is the volume?



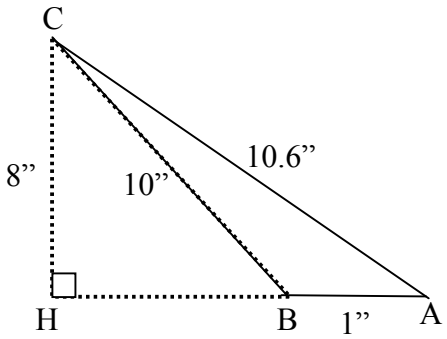
6. **Std 8.0** The diagonals of a rhombus are perpendicular bisectors of each other. What is the perimeter of the rhombus whose diagonals are 8 inches and 10 inches?

7. **Std 8.0** The area of a trapezoid is 64 in^2. The base lengths are 6 in. and 10 in. What is the height?

8. **Std 10.0** Mr Smith's backyard has the design shown below. What is the area of the lawn?



9. **Std 10.0** In ΔABC $AB = 1", BC = 10", and\ \ AC = 10.6"$. If CH *is* 8", what is the area of ΔABC?



10. **Std10.0** A regular hexagon has side lengths of 20 cm and an apothem of $10\sqrt{3}$ cm. What is the approximate area in cm^2?

11. **Std 10.0** Sonia wants to make a square tablecloth with a diagonal of 10 feet. What is the area of the tablecloth?

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12. **Std10.0** What is the area of an equilateral triangle with side length 8?

13. **Std 10.0** The area of a regular hexagon is $600\sqrt{3}$ sq. in. The apothem is $10\sqrt{3}$ in. What is the length of each side?

14. **Std11.0** Each side of a square measures x inches. If each side is quadrupled, what is the perimeter of the new square?

15. **Std 11.0** An equilateral triangle has a perimeter of $2p$. A new triangle is formed by using one-half of each side of the original triangle. What is the length of each side of the new triangle?

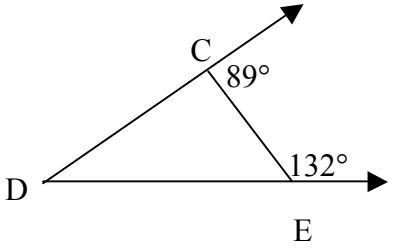
16. **Std 11.0** Two prisms are similar. If the ratio of their volumes is 27:64, what is the ratio of

a) surface area?
b) perimeter of the base?
c) lateral area?

17. **Std 11.0** Two triangles are similar. The first triangle has a side length of n. The second triangle has a side of 3n.

a) What is the ratio of their areas?
b) What is the ratio of their heights?

18. **Std 12.0** In ΔCDE below, the exterior angle at C measures 89° and the exterior angle at E measures 132°. What is the measure of $\angle D$?

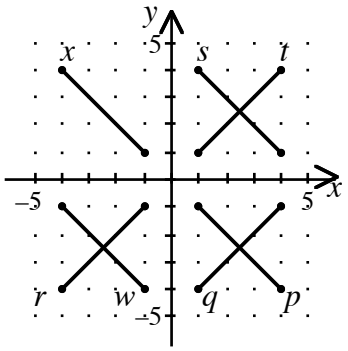


19. **Std 12.0** What is the name of the regular polygon that has an exterior angle of 36°?

20. **Std 12.0** An interior angle of a regular polygon is 170°. How many sides does the polygon have?

21. **Std 12.0** What is the sum of the interior angles of an octagon?

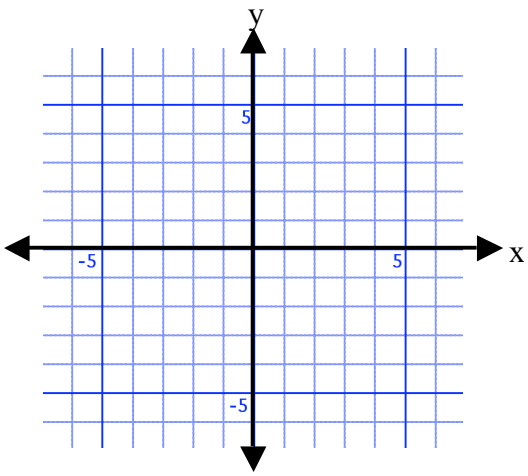
22. **Std 22.0** Segment x is reflected in the x-axis, followed by a reflection in the y-axis, followed by another reflection in the x-axis. What is its final image?



23. **Std 22.0** ΔXYZ with vertices at X (-4,2), Y (-1,7), and Z (4,1) is translated 3 units to the right and 2 units up to form $\Delta X'Y'Z'$. What are the coordinates of

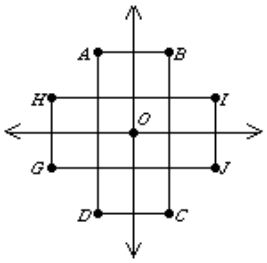
a) X'
b) Y'
c) Z'

24. **Std 22.0** Graph the figure with vertices $(1,-1)$, $(-1,1)$, $(-5,-3)$, and $(-3,-5)$. Draw the rotation image for a rotation of $180°$ about the origin.



25. **Std 22.0**

Rectangle $GHIJ$ is rotated $90°$ clockwise about point O. Find the image of $\overline{IJ}$.



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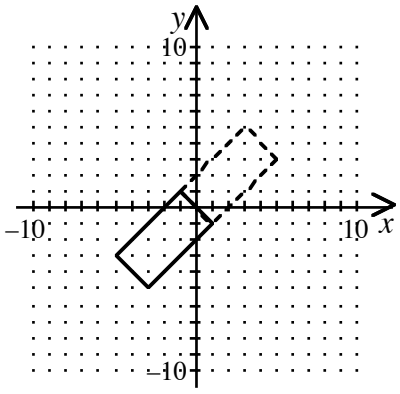
Answer key

1. 45 sq units
2. 400π in^2
3. 150 cm^2
4. $2\sqrt{3}$
5. a) 140 ft^2 b) 220 ft^2 c) 200 ft^3
6. $4\sqrt{41}$ in
7. 8 in.
8. 80 ft^2
9. 4 sq. in.
10. $600\sqrt{3}$ = 1039.2 cm^2
11. 50 sq ft
12. $16\sqrt{3}$ sq units
13. 20 in
14. $16x$ *in*
15. $\frac{p}{3}$
16. A. 9:16 B. 3:4 C. 9:16
17. a) 1:9 b) 1:3
18. 41°
19. decagon
20. 36 sides
21. 1080°
22. t
23. A. (-1, 4) B. (2, 9) C. (7, 3)
24. 

25. $\overline{CD}$