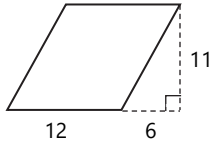


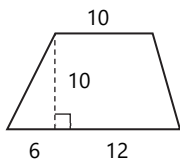
LESSON 168 Review: Perimeters and Areas

Leave your answers in simplest radical form and in terms of π unless directed otherwise.

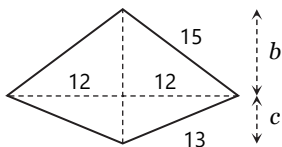
1. Find the area of the parallelogram.



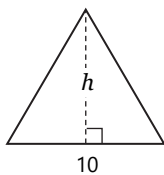
2. Find the area of the trapezoid.



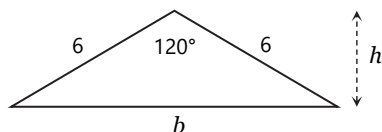
3. Find the area of the kite.



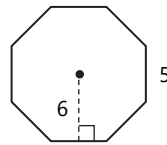
4. Find the area of the equilateral triangle.



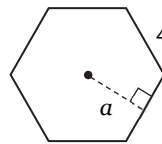
5. Find the area of the isosceles triangle.



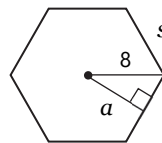
6. Find the area of the regular octagon with side length 5 and apothem 6.



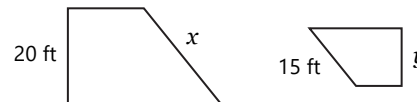
7. Find the apothem of the regular hexagon with side length 4. Then find the area.



8. Find the apothem and side length of the regular hexagon with radius 8. Then find the area.

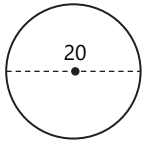


9. Two trapezoids are similar. Their perimeters are 90 ft and 54 ft. Find the values of x and y .



10. Two similar parallelograms have areas 216 cm^2 and 96 cm^2 . The larger parallelogram has height 18 cm. What is the height of the smaller parallelogram?

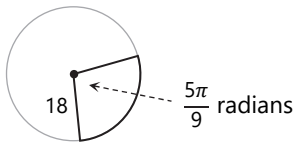
11. Find the circumference and area of the circle.



12. Find the arc length and area of the sector given its angle in degrees.



13. Find the arc length and area of the sector given its angle in radians.



14. Be sure to understand the proportional relationship between central angle, arc length, and sector area in a circle. Fill in the blanks.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{central angle in degrees}}{\text{?}}$$

$$= \frac{\text{central angle in radians}}{\text{?}}$$

$$= \frac{\text{arc length}}{\text{?}}$$

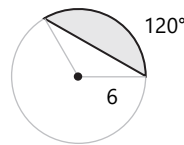
$$= \frac{\text{sector area}}{\text{?}}$$

15. Write a proportion to convert 45 degrees to radians. Then solve the proportion.

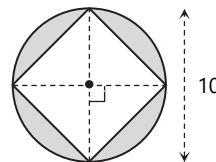
16. Write a proportion to convert $2\pi/5$ radians to degrees. Then solve the proportion.

17. A sector has radius 6 and area 15π . Write a proportion to find the arc length of the sector. Then solve the proportion.

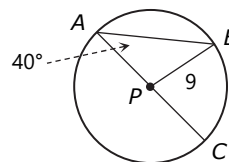
18. Find the area of the shaded segment.



19. A square is inscribed within a circle. Find the area of the shaded region.



20. Find the measure of $\angle BPC$. Then find the area of sector BPC .



21. (HONORS) What is the degree measure of the acute angle formed by the hands of a clock at 2:00?