

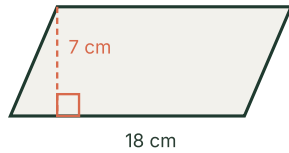
## Area of Polygons

HSG.GPE.B.7

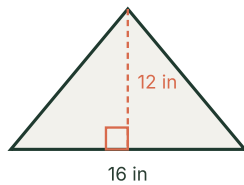
Name \_\_\_\_\_ Date \_\_\_\_\_

Find each area. Use the right formula, show your work, and include square units. For a regular polygon use  $A = \frac{1}{2}aP$  (apothem times perimeter).

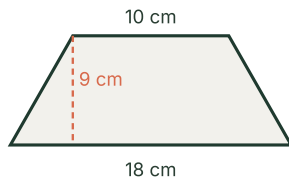
1. Find the area of the parallelogram.



2. Find the area of the triangle.

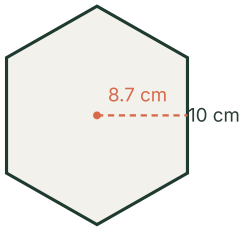


3. Find the area of the trapezoid using  $A = \frac{1}{2}(b_1 + b_2)h$ .



4. A triangle has a base of 24 ft and a height of 9 ft. Find its area.
5. Find the area of a rhombus whose diagonals measure 12 cm and 16 cm. (Use  $A = \frac{1}{2}d_1d_2$ .)

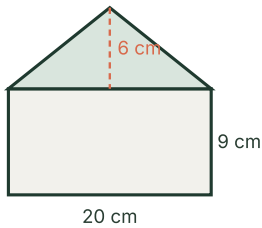
6. Find the area of the regular hexagon with the apothem and side length shown.



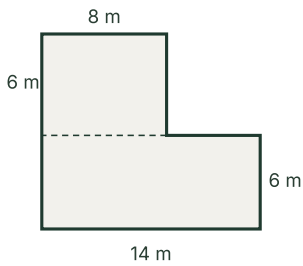
7. A regular pentagon has a side length of 8 in and an apothem of 5.5 in. Find its area.

8. A parallelogram has an area of 84 square m and a base of 12 m. Find its height.

9. Find the total area of the composite figure (a rectangle with a triangle on top).



10. Find the area of the L-shaped figure by splitting it into rectangles.



11. Which formula gives the area of a regular polygon with apothem  $a$  and perimeter  $P$ ?

A)  $aP$

B)  $\frac{1}{2}aP$

C)  $\frac{1}{2}a + P$

D)  $2aP$

12. A triangle has an area of 54 square cm and a height of 12 cm. Find the length of its base.

13. A patio is shaped like a trapezoid with parallel sides of 22 ft and 14 ft and a height of 10 ft. Concrete costs \$6 per square foot. Find the total cost to pour the patio.

14. A regular octagonal tabletop has a side length of 6 in and an apothem of 7.2 in. A finish covers 50 square inches per ounce. How many full ounces are needed to coat the top?