

Name: _____

Key

Date: _____

AREA OF PARALLELOGRAMS

GEOMETRY


VOCABULARY

- **Area:** The number of SQUARE units contained in a figure.
- **Parallelogram:** Quadrilateral with 2 pairs of PARALLEL sides

GUIDED NOTES:


1. To find the area of a rectangle, MULTIPLY the base by the height.
2. The algebraic formula is: $A = b \cdot h$.
3. Area is measured in SQUARE units.
4. The area of a parallelogram is the Product of its base and its height.
5. The algebraic formula is: $A = b \cdot h$.
6. The base is always perpendicular to the height.

GUIDED PRACTICE: Find the area of each figure. Show all work.



3 in.
6 in.


$A = 6 \cdot 3$
 $A = 18 \text{ in}^2$



12 in.
16 in.

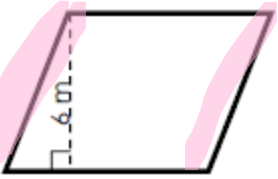
$$\begin{array}{r} 12 \\ \times 16 \\ \hline 72 \\ 120 \\ \hline 192 \end{array}$$

$A = 12 \cdot 16$
 $A = 192 \text{ in}^2$



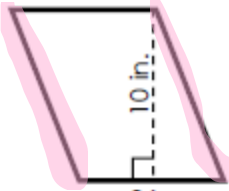
15 m
11 m

$A = 15 \cdot 11$
 $A = 165 \text{ m}^2$

$$\begin{array}{r} 15 \\ \times 11 \\ \hline 15 \\ 150 \\ \hline 165 \end{array}$$


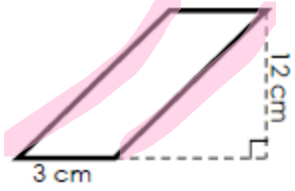
6 m
7 m

$A = 7 \cdot 6$
 $A = 42 \text{ m}^2$



10 in.
8 in.

$A = 8 \cdot 10$
 $A = 80 \text{ in}^2$



12 cm
3 cm

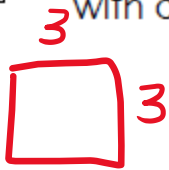
$A = 3 \cdot 12$
 $A = 36 \text{ m}^2$

Don't use the diagonal side for Area

AREA OF PARALLELOGRAMS

PRACTICE PROBLEMS:

1 What is the area of a square with a side length of 3 cm?

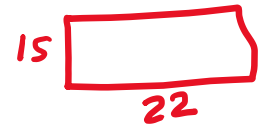


$$A = 3 \cdot 3$$

$$A = 9 \text{ cm}^2$$

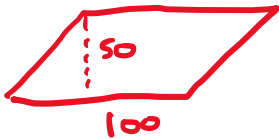
2 What is the area of a rectangle with a base of 22 inches and a height of 15 inches?

$$\begin{array}{r} 22 \\ \times 15 \\ \hline 110 \\ + 220 \\ \hline 330 \end{array}$$



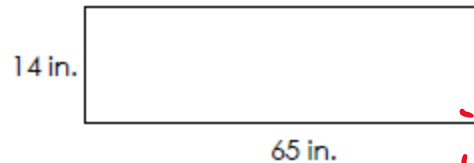
$$A = 330 \text{ in}^2$$

3 What is the area of a parallelogram with a base of 100 cm and a height of 50 cm?



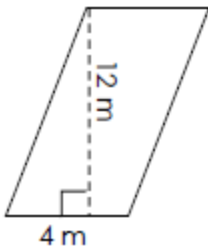
$$\begin{array}{r} 100 \\ \times 50 \\ \hline 5000 \\ \hline 5000 \text{ cm}^2 \end{array}$$

4 Find the area of the figure below:



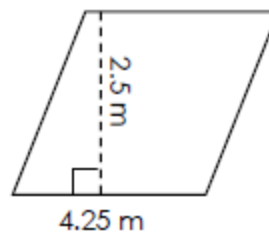
$$\begin{array}{r} 65 \\ \times 14 \\ \hline 260 \\ + 650 \\ \hline 910 \text{ in}^2 \end{array}$$

5 Find the area of the figure below:



$$\begin{array}{r} 12 \\ \times 4 \\ \hline 48 \text{ m}^2 \end{array}$$

6 Find the area of the figure below:



$$\begin{array}{r} 4.25 \\ \times 2.5 \\ \hline 2125 \\ + 8500 \\ \hline 10.625 \text{ m}^2 \end{array}$$

7 Christopher is helping paint the set for the school play. He has to paint a wooden parallelogram with a base of 7 feet and a height of 14 feet. What is the area of the surface that Christopher must paint?

$$\begin{array}{r} 14 \\ \times 7 \\ \hline 98 \text{ ft}^2 \end{array}$$