Unit: Plane Geometry & Similarity
Student Handout 3

Name _____
Date _____ Pd _____

AREA OF RECTANGLES AND PARALLELOGRAMS

AREA OF RECTANGLES

- Area is the _____ _____ of a two-dimensional figure. We can think of it as the square units that a shape covers.
- Use the formula _____, where "b" is the length of the _____, and "h" is the height of the rectangle.
- Area is measured in _____ units:

Ex: inches • inches = ____ feet • feet = ____ meters • meters = ____

Practice using the formula for the area of a rectangle to solve the problems below.

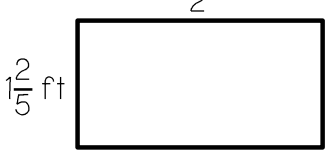
1.

Formula: _____

Plug in Values: _____

Area: _____

2.



Formula: _____

Plug in Values: _____

Area: _____

3. Two walls of a room are being painted. Each wall measures 16 feet by $8\frac{1}{2}$ feet. How many square feet will be painted?

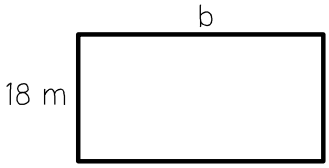
WRITING FORMULAS

- Formulas can be manipulated to solve for missing information.

Ex: $A = bh$ can be written as _____ or _____ .

Use your understanding of the area of rectangles to answer the question below.

4. The area of the rectangle is 162 m^2. What is the length of the base, b?



Formula: _____

Plug in Values: _____

Value of b: _____

Solve each of the problems below.

5. A rectangular canvas covers 225 square inches on a wall. If the canvas has a height of 18 inches, then what is the base?

6. Students were asked to write a formula that could be used to find the height of a rectangle with a base of 12 cm and an area of 60 cm^2. Circle the names of those who did this correctly.

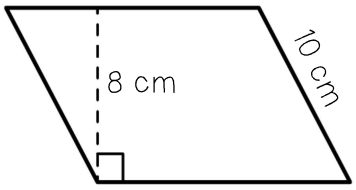
ILYA	CHLOE	BEN	SHAWN	KATE
$60 = 12(12)$	$12 = 60(h)$	$60 = 12(h)$	$h = \frac{12}{60}$	$h = \frac{60}{12}$

AREA OF PARALLELOGRAMS

- The dimensions of a parallelogram are also referred to as the base and height.
- Use the formula _____, where "b" is the length of the base and "h" is the height of the parallelogram, which makes a _____ with the base.

Practice using the formula for the area of a parallelogram to solve the problems below.

7.

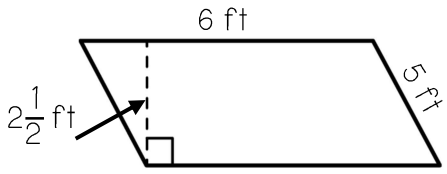


Formula: _____

Plug in Values: _____

Area: _____

8.

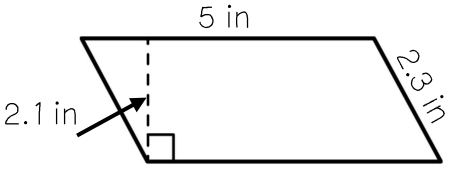


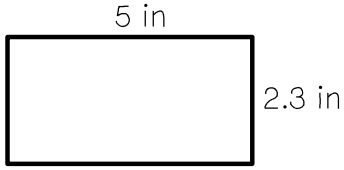
Formula: _____

Plug in Values: _____

Area: _____

9. Karlie was given the rectangle and parallelogram pictured below on her math test. She said that they both had an area of 11.5 in^2 because they both had the same base and the same height. Is she correct? If not, explain why and find the correct area.





Summarize today's lesson:

Unit: Plane Geometry & Similarity
Homework 3

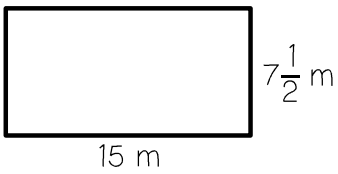
Name _____

Date _____ Pd _____

AREA OF RECTANGLES AND PARALLELOGRAMS

Solve the problems below. Be sure to show your work.

1. Determine the area of the rectangle.



Formula: _____

Plug in Values: _____

Area: _____

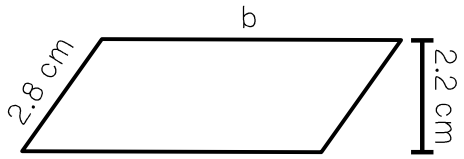
2. Determine the area of the parallelogram.

Formula: _____

Plug in Values: _____

Area: _____

3. The area of the parallelogram is 17.6 cm^2. What is the length of the base?

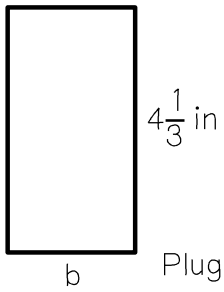


Formula: _____

Plug in Values: _____

Base: _____

4. The area of the rectangle is $10\frac{5}{6}$ in^2. What is the length of the base?



Formula: _____

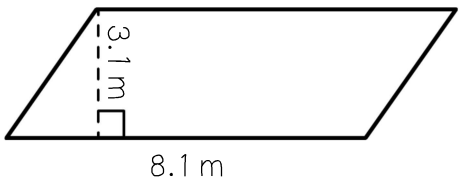
Plug in Values: _____

Base: _____

For 5-7, use your understanding of area to solve the application problems below.

5. How many square feet of wallpaper will be used to cover a wall measuring 9 feet by $18\frac{1}{4}$ feet?

6. The parallelogram-shaped area below is being covered with carpet. The carpet is priced at $2.80 per square meter. How much will it cost to carpet the area?



7. Jordan is helping his dad build a doghouse. The floor is rectangle-shaped with a width of 5 feet and an area of 36.25 ft^2. What is the length of the rectangular floor?