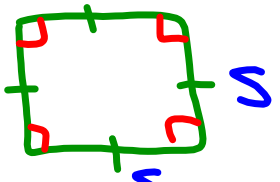
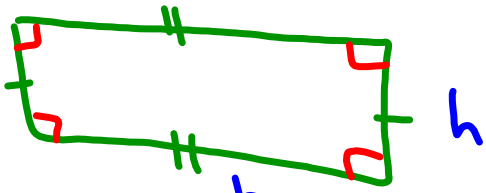
Geometry

8.3: Areas of Squares and Rectangles

Name:_____

Students will be able to find the area of squares and rectangles. Students will also be able to solve side lengths.

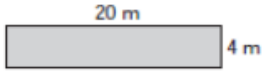
☆Area:

Formulas for Area, A of Squares and Rectangles	
Square	**Rectangle**
 $A = s \cdot s = s^2$ $A = s^2$	 $A = bh$

Example 1:
Find the area of the SQUARE.

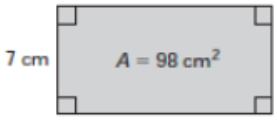
$A = s^2$
$A = 20^2$
$A = 400\ in^2$

Example 2:
Find the area of the RECTANGLE.



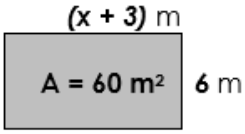
$A = bh$
$A = 20 \cdot 4$
$A = 80\ m^2$

Example 3: The RECTANGLE has an area of 98 square inches. Find its base.



$A = bh$
$\frac{98}{7} = \frac{7b}{7}$
$14\ cm = b$

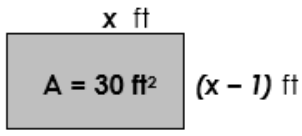
Example 4: Solve for x, using the given area.



$A = bh$
$60 = 6(x+3)$
$60 = 6x + 18$
$-18 \quad -18$
$42 = 6x$
$\frac{42}{6} = \frac{6x}{6}$
$7 = x$

$\frac{60}{6} = \frac{6(x+3)}{6}$
$10 = x + 3$
$-3 \quad -3$
$7 = x$

Example 5: Solve for x, using the given area.



$A = bh$

$30 = x(x-1)$

$30 = x^2 - x$

$-30 \qquad -30$

$0 = x^2 - x - 30$

BOX!

	x	-6
x	x^2	$-6x$
$+5$	$5x$	-30

multiply

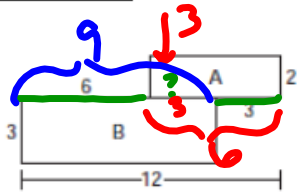
$1 \cdot -30 = -30$

Add

-1

$x = 6$

Example 6: Find the dimensions of rectangles A and B.



A: 2×6

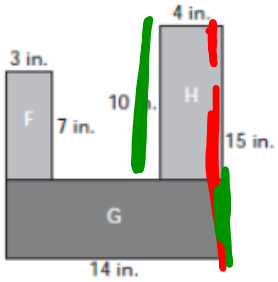
B: 3×9

$(x-6)(x+5) = 0$

$x - 6 = 0$
$+6 \quad +6$
$x = 6$

$x + 5 = 0$
$-5 \quad -5$
$\cancel{x = -5}$

Example 7: Find the area of the polygon made up of rectangles.



F: $3 \times 7 = 21 \text{ in}^2$

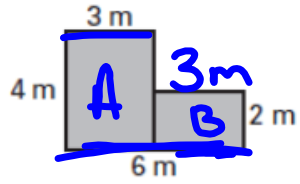
H: $10 \cdot 4 = +40 \text{ in}^2$

G: $5 \cdot 14 = 70 \text{ in}^2$

$\boxed{131 \text{ in}^2}$

You TRY!

Find the area of the polygon made up of rectangles.



A: $3 \times 4 = 12 m^2$

B: $3 \times 2 = + 6 m^2$

$18 m^2$

Homework: 8.3 Worksheet