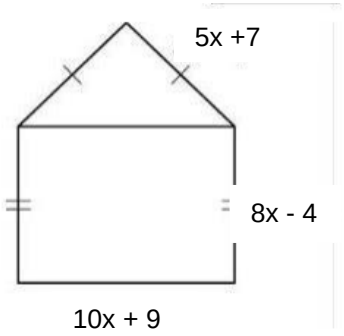
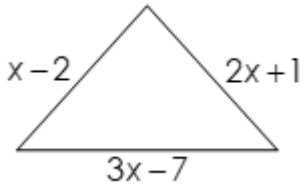
Name: _____ Date: _____

Unit 1 Remediation

Skill Set	In Class Example	You Try
1. Unit Conversions • 5280 feet = 1 mi • 1.6 km = 1 mi • 0.034 ounces = 1 mL • 1.05 qts = 1 L • 4 qts = 1 gal • 0.454 kg = 1lb • 16 ounces = 1 lb	A rectangle has a length of 150 centimeters and a width of 12 meters. What is the area of the rectangle in meters?	Tara has a rectangular garden. The length is 10 meters and the width is 1.2 dm. What is the perimeter of her garden?
	If a runner's speed is 20 feet per second, what is their speed in miles per hour?	A car is driving at a rate of 3 kilometers per minute. What is the car's speed in meters per hour?
2. Irrational Numbers	If you simplified $3\left(6+\sqrt{2}\right)$, would the answer be rational or irrational? Why?	If you simplified $5\sqrt{3}\left(7+\sqrt{3}\right)$, would the answer be rational or irrational? Why?
	Simplify the following expression: $\sqrt{6a^5}\cdot 5\sqrt{12b^2}$	Simplify: $\sqrt{20xy^2}\bullet\sqrt{35xy^3}$
	Simplify the following expression: $9\sqrt{18}-3\sqrt{50}$	Simplify: $3\sqrt{98}-6\sqrt{18}$

<table>
<tr><td rowspan="2">3. Area and Perimeter</td><td>The expression s^2 is used to calculate the area of a square, where s is the side length of the square. If you are told the area of the square is $(3r)^2$, then how long is one side of the square?</td><td>The area of a rectangle is lw, where l is the length of the rectangle and w is the width. If you are told that the area of the rectangle is 5(x+2). What does the (x+2) represent?</td></tr>
<tr><td>A model of a house is shown. What is the <u>perimeter</u> of the model?
 
</td><td>Find the perimeter:
 
</td></tr>
<tr><td rowspan="2">4. Multiplication</td><td>Simplify the expression $(x-4)^2$</td><td>Simplify the expression $(x+9)^2$</td></tr>
<tr><td>The length of a rectangle is 6 inches. The width is 3w inches.

If the coefficient of the width increases by 2, what could be an expression for the area of the rectangle?</td><td>The width of a rectangle is 8 inches. The length is 5x inches.

If the coefficient of the length decreases by 3, what could be an expression for the area of the rectangle?</td></tr>
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