Name:

Date:

Lesson 6.2.6 Homework

* **6-103.** For each expression below:
	+ Sketch and label a pair of similar shapes (like those at right or in problem 6-92) that would result in each calculation.
	+ Rewrite the expression so that the operation is multiplication.
	+ Calculate the value of the expression.
	1. 6 ÷ $\frac{1}{2}$
	2. 4 ÷ $\frac{2}{3}$
*
* **6-104.**Sketch the triangle below.  Then redraw it with sides that are   as long as the sides of the original
	1. Calculate the perimeters of both triangles.
	2. Calculate the areas of both triangles.
	3. What is the relationship between the perimeters of the triangles?

**6-105.**Lucy and Marissa each designed a box plot to represent this data set:

16  18  19  19  25  26  27  32  35

Their plots are shown below.  Which plot is scaled correctly and why?  Explain the mistakes in the incorrect plot.

* 1. 
	2. 
*

**6-106.**Draw a coordinate graph, and then plot and connect the following points:  A(−3, 1),  B(−1, 3),  C(4, 2),  D(2, 0).

* 1. What is the shape you created?
	2. Reflect the shape across the x‑axis.  List the coordinates of the new points.
	3. Multiply each coordinate of the original shape by 3.  Graph the dilated shape.  What are the new coordinates of the points?

**6-107.**Examine the diagram at right.  The smaller triangle is similar to the larger triangle.  Write and solve a proportion to find  x.  It may be helpful to draw the two triangles separately.

**6-108.**SEQUENCES OF TRANSFORMATIONS

* 1. A figure is rotated and reflected.  What can you say about the new figure in relation to the original figure?
	2. A figure is translated, reflected, and then dilated.  What can you say about the new figure in relation to the original figure?

**6-109.**This problem is a checkpoint for multiple representations of linear equations.  It will be referred to as Checkpoint 6.

For each situation given below, complete the Representations of Patterns Web by finding the missing x → y table, graph, and/or rule.  Since there are many possible patterns, it is not necessary to create one.

* 1. 
	2. y = −3x + 7
	3. 
	4. 