

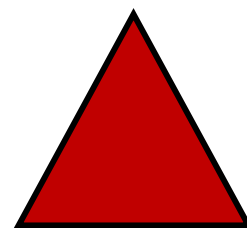
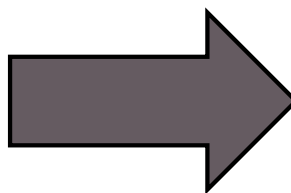
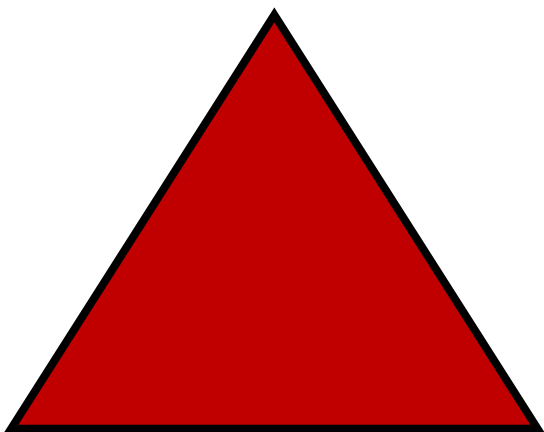
Geometry

Transformations Practice

Dilations, Rotations,
Reflections, Translations Practice

&

Common Core Looping



Common Core

8.G.1, 2, 3

8.F.1

8.NS.1,2

8.EE.6

Dilations, Rotations, Reflections, & Translations
Practice

Name: _____

Date: _____

New Rule/Terms to Remember:

Dilation of a Figure: _____

Types of Dilations: _____ and _____

8.G.1,2,3

	<p>1. Draw triangle ABC with the following vertices: A(4, 8), B(6, 2), C(2, 0)</p>
	<p>Dilate the pre-image by a scale factor of $\frac{1}{2}$. What type of dilation is this? _____</p> <p>Draw the image. List the new coordinates: A' _____, B' _____, C' _____</p>

	<p>2. Draw triangle ABC with the following vertices: A(-2, 4), B(3, 1), C(2, -2)</p>
	<p>Dilate the pre-image by a scale factor of 2. What type of dilation is this? _____</p> <p>Draw the image. List the new coordinates: A' _____, B' _____, C' _____</p>

	<p>3. Graphing is optional. Begin with pre-image of triangle LMN. Its vertices are L(-5, -4), M(-2, 0), N(0, -3).</p>
	<p>Reflect the pre-image over the x-axis. List the coordinates of the image: A' _____, B' _____, C' _____</p> <p>Next, rotate the image 180°. List the coordinates of the new image: A'' _____, B'' _____, C'' _____</p>

8.G.1,2,3

4. The coordinates of a triangle are A(0, 4), B(3, 1), C(1, 0). Translate the pre-image using the rule: $(x, y) \rightarrow (x - 5, y + 2)$.

List the coordinates of the image: A' _____, B' _____, C' _____

5. The coordinates of a triangle are L(-4, 5), M(-2, 1), N(-3, -6). Rotate the pre-image 90° clockwise about the origin.

List the coordinates of the image: L' _____, M' _____, N' _____

Next, dilate the image by using a scale factor of 3.

List the coordinates of the new image: L'' _____, M'' _____, N'' _____

8.F.1

6. Tell whether the set of ordered pairs is a function. Then explain why or why not.
(4, 7), (5, 9), (7, 8), (4, 6).

Is it a function? _____

Why or why not? _____

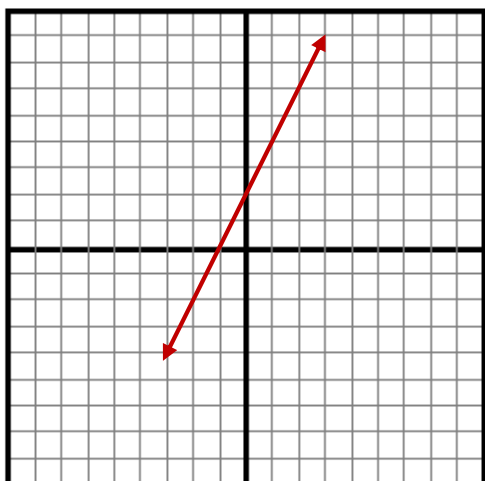
8.NS.2

7. Estimate the value of $\sqrt{80}$ to the nearest tenths place without using a calculator.

Estimate: _____

Explain how you found your estimate:

8.EE.6



8. Write the equation of the line in slope-intercept, or function, form:

m = _____

b = _____

Equation: _____

8.NS.1

9. Is $\frac{2}{3}$ rational or irrational? _____

Explain how you know: _____

Dilations, Rotations, Reflections, & Translations
Practice

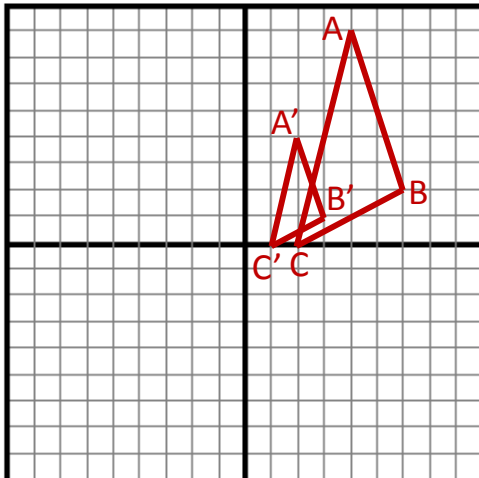
ANSWER KEY

New Rule/Terms to Remember:

Dilation of a Figure: $(x, y) \rightarrow (kx, ky)$

Types of Dilations: **Reduction and Enlargement**

8.G.1,2,3

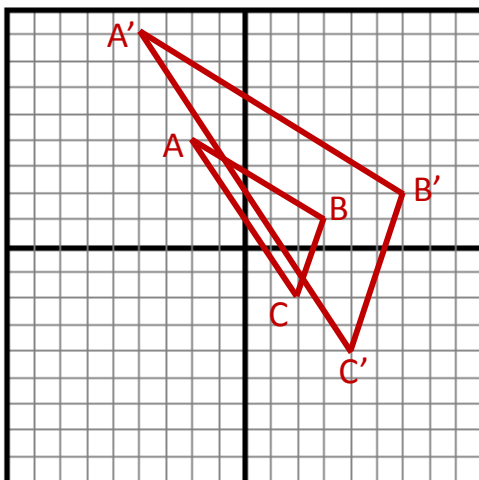


1. Draw triangle ABC with the following vertices:
A(4, 8), B(6, 2), C(2, 0)

Dilate the pre-image by a scale factor of $\frac{1}{2}$.
What type of dilation is this? **Reduction**

Draw the image. List the new coordinates:

A'(2, 4), B'(3, 1), C'(1, 0)

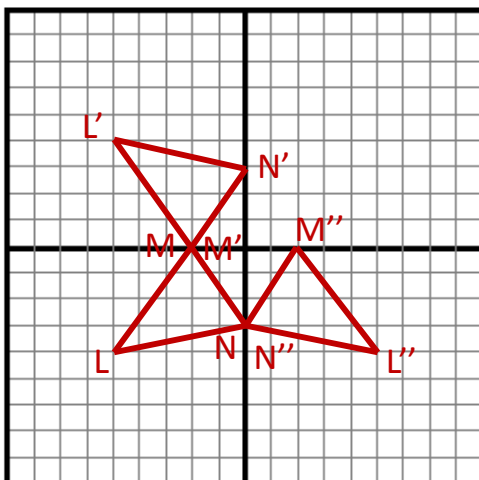


2. Draw triangle ABC with the following vertices:
A(-2, 4), B(3, 1), C(2, -2)

Dilate the pre-image by a scale factor of 2.
What type of dilation is this? **Enlargement**

Draw the image. List the new coordinates:

A'(-4, 8), B'(6, 2), C'(4, -4)



3. **Graphing is optional.** Begin with pre-image of triangle LMN. Its vertices are L(-5, -4), M(-2, 0), N(0, -3).

Reflect the pre-image over the x-axis.
List the coordinates of the image:

L'(-5, 4), M'(-2, 0), N'(0, 3)

Next, rotate the image 180° . List the coordinates of the new image:

L''(5, -4), M''(2, 0), N''(0, -3)

8.G.1,2,3

4. The coordinates of a triangle are A(0, 4), B(3, 1), C(1, 0). Translate the pre-image using the rule: $(x, y) \rightarrow (x - 5, y + 2)$.

List the coordinates of the image: $A'(-5, 6)$, $B'(-2, 3)$, $C'(-4, 2)$

5. The coordinates of a triangle are L(-4, 5), M(-2, 1), N(-3, -6). Rotate the pre-image 90° clockwise about the origin.

List the coordinates of the image: $L'(5, 4)$, $M'(1, 2)$, $N'(-6, 3)$

Next, dilate the image by using a scale factor of 3.

List the coordinates of the new image: $L''(15, 12)$, $M''(3, 6)$, $N''(-18, 9)$

8.F.1

6. Tell whether the set of ordered pairs is a function. Then explain why or why not.
(4, 7), (5, 9), (7, 8), (4, 6).

Is it a function? **No**

Why or why not? **4 has 2 outputs.**

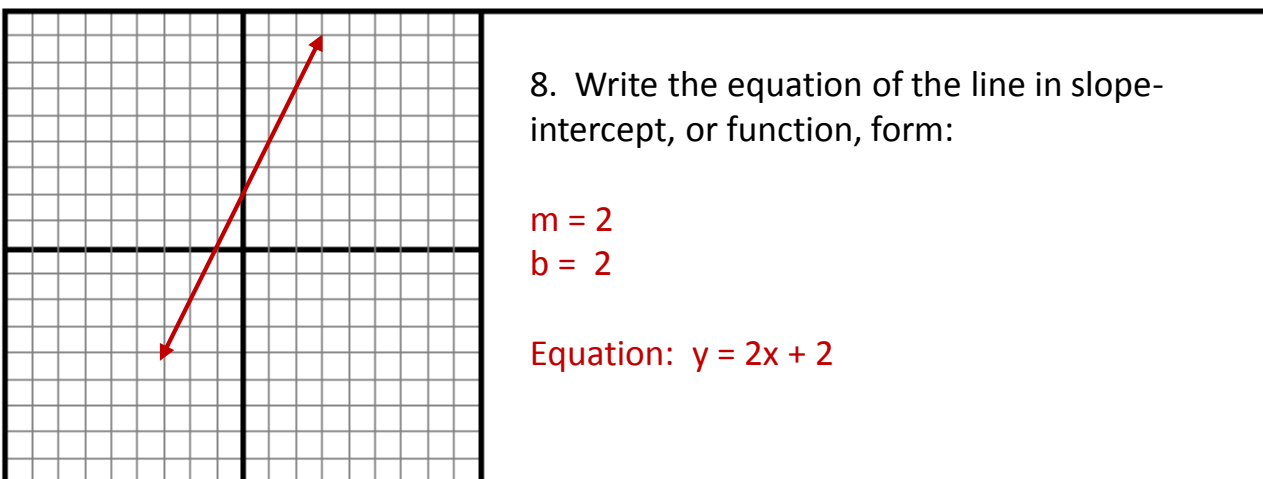
8.NS.2

7. Estimate the value of $\sqrt{80}$ to the nearest tenths place without using a calculator.

Estimate: **8.9**

Explain how you found your estimate: **80 lies between the perfect squares of 64 and 81. $\sqrt{64} = 8$ and $\sqrt{81} = 9$. Because 80 is so close to 81, I chose 8.9 as my estimate.**

8.EE.6



8.NS.1

9. Is $\frac{2}{3}$ rational or irrational? **Rational**

Explain how you know: **$\frac{2}{3}$ is written as a quotient of 2 integers. OR: When written in decimal form, $\frac{2}{3}$ has a repeating pattern.**

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