**PRACTICE:** LESSON 10.1 – IDENTIFYING TRANSFORMATIONS & CONGRUENCY Name: _____

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|---|---|
| **Learning Goal**: I can identify a **transformation** as a ***translation***, ***reflection***, ***rotation***, or ***dilation*** and determine **congruency** of the new and old image.<br>**Meta de Aprendizaje**: *Puedo identificar una **transformación** como una **traducción**, **reflexión**, **rotación** o **dilatación** y determinar la **congruencia** de la imagen nueva y la vieja.* | **Language Goal:** I can discuss with a partner how to determine if a **transformation** is a ***translation***, ***reflection***, ***rotation***, or ***dilation*** and then explain our answer.<br>**Lenguaje Objetivo**: *Puedo discutir con un compañero cómo determinar si una **transformación** es una **traducción**, **reflexión**, **rotación** o **dilatación** y luego explicar nuestra respuesta.* |

**Directions:** Use your notes to answer the following questions.

1. Which rule is the **ONLY** rule that **adds** or **subtracts**? _____
2. What is a **dilation** called that ***gets bigger***? _____
3. Which transformation "***flips***"? _____
4. Which transformation "***turns***"? _____
5. Which rule is the **ONLY** rule that **multiplies**? _____
6. What is a **dilation** called that ***gets smaller***? _____
7. Which transformation has **ONLY** two rules? _____
8. What is the rule for a 180° **rotation**? _____
9. What is the rule for a **reflection** across the y-axis? _____
10. Which transformation is **NOT** congruent? _____

**Directions:** Use your notes to determine if the rule describes a **translation**, **reflection**, **rotation**, or **dilation**.

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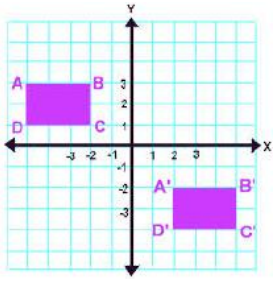
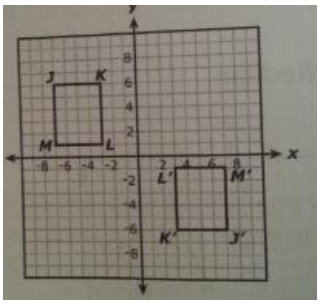
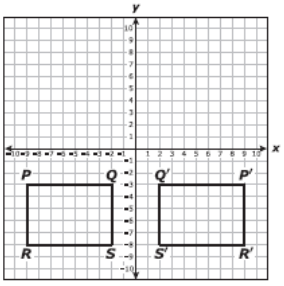
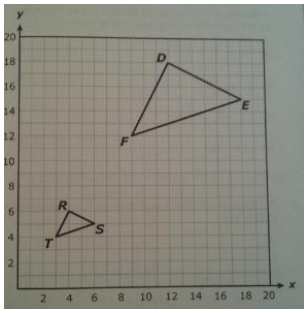
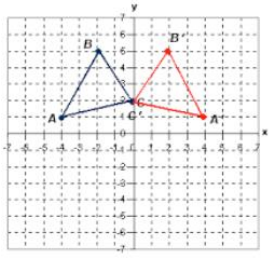
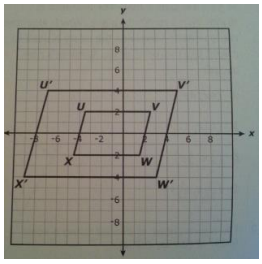
|---|---|
| 1. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (x, -y)$<br>**Answer:** _____ | 2. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (x + 3, y - 1)$<br>**Answer:** _____ |
| 3. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (4x, 4y)$<br>**Answer:** _____<br>**ENLARGEMENT** or **REDUCTION?** | 4. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (-x, -y)$<br>**Answer:** _____ |
| 5. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (y, -x)$<br>**Answer:** _____ | 6. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (-x, y)$<br>**Answer:** _____ |

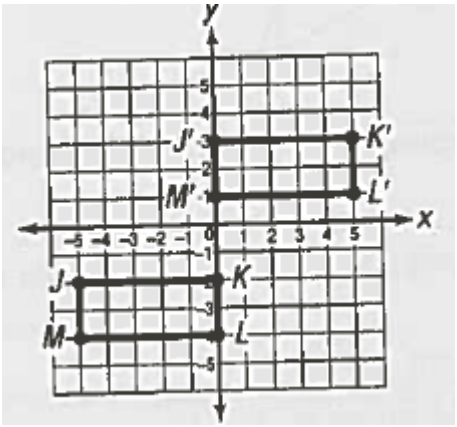
| | |
|---|---|
| 7. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (x, y + 3)$<br>**Answer:** _____ | 8. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (0.25x, 0.25y)$<br>**Answer:** _____<br>**ENLARGEMENT** or **REDUCTION?** |
| 9. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (-y, x)$<br>**Answer:** _____ | 10. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (\frac{1}{3}x, \frac{1}{3}y)$<br>**Answer:** _____<br>**ENLARGEMENT** or **REDUCTION?** |

**Directions:** Use your notes to determine if the transformation is a **translation**, **reflection**, **rotation**, or **dilation**.

| | |
|---|---|
| 1. Which transformation is shown below?<br>  <br><br>**Answer:** _____ | 2. Which transformation is shown below?<br>  <br><br>**Answer:** _____ |
| 3. Which transformation is shown below?<br>  <br><br>**Answer:** _____ | 4. Which transformation is shown below?<br>  <br><br>**Answer:** _____ |
| 5. Which transformation is shown below?<br>  <br><br>**Answer:** _____ | 6. Which transformation is shown below?<br>  <br><br>**Answer:** _____ |

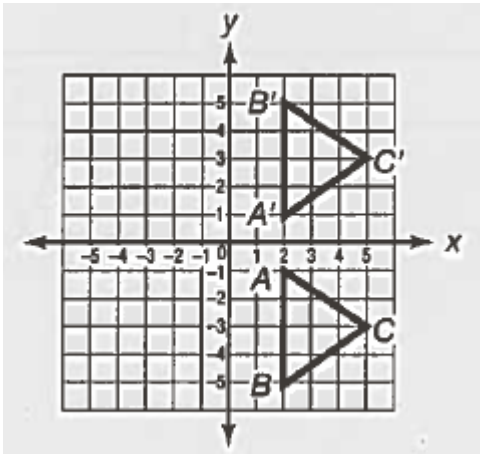
**Directions:** Use your notes to determine if the rule or the graph represents a **translation**, **reflection**, **rotation**, or **dilation**.

1. Which transformation is shown below?



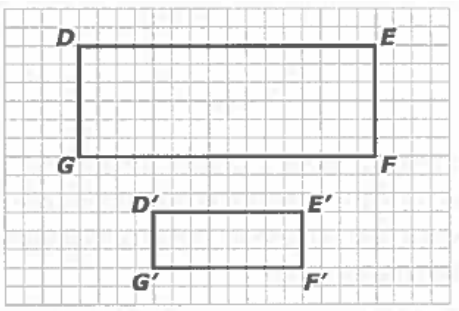

**Answer:** _____

2. Which transformation is shown below?




**Answer:** _____

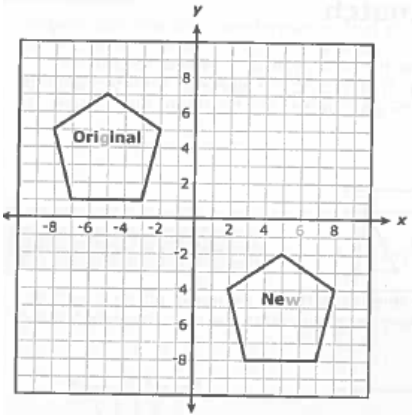
3. Which transformation is shown below?




**Answer:** _____

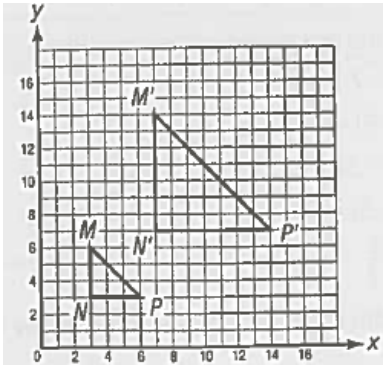
**ENLARGEMENT OR REDUCTION?**

4. Which transformation is shown below?




**Answer:** _____

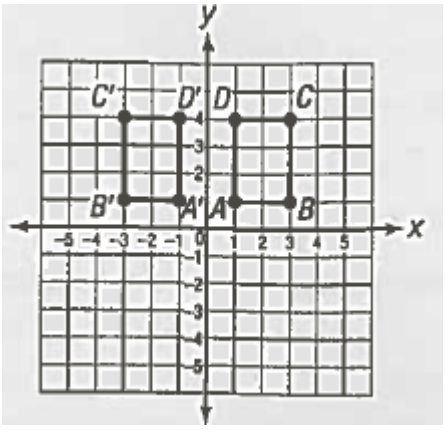
5. Which transformation is shown below?




**Answer:** _____

**ENLARGEMENT OR REDUCTION?**

6. Which transformation is shown below?




**Answer:** _____

7. Which transformation is described by the following rule:

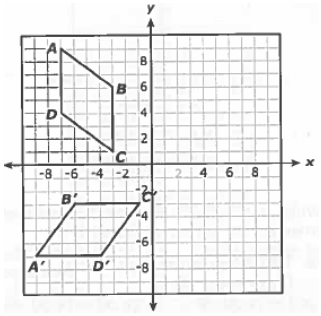
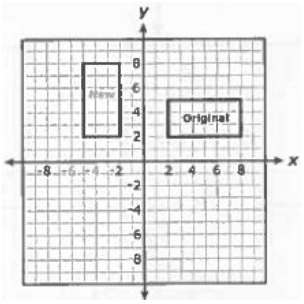
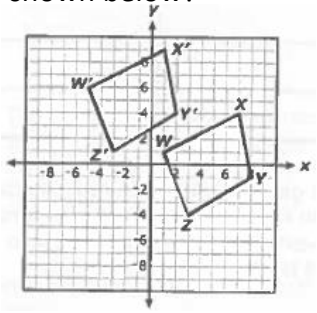
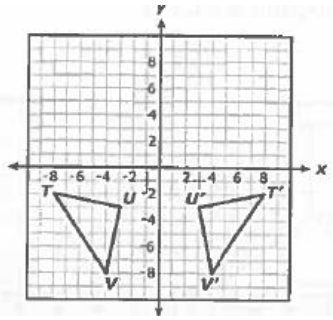
$$(x, y) \rightarrow (x - 2, y + 5)$$

**Answer:** _____

8. Which transformation is described by the following rule:

$$(x, y) \rightarrow (-x, y)$$

**Answer:** _____

| | |
|---|---|
| 9. Which transformation is shown below?<br>  <br><br>**Answer:** _____ | 10. Which transformation is shown below?<br>  <br><br>**Answer:** _____ |
| 11. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (1.5x, 1.5y)$<br>**Answer:** _____<br>**ENLARGEMENT** or **REDUCTION?** | 12. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (y, -x)$<br>**Answer:** _____ |
| 13. Which transformation is shown below?<br>  <br><br>**Answer:** _____ | 14. Which transformation is shown below?<br>  <br><br>**Answer:** _____ |
| 15. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (\frac{4}{3}x, \frac{4}{3}y)$<br>**Answer:** _____<br>**ENLARGEMENT** or **REDUCTION?** | 16. Which transformation is described by the following rule:<br>$(x, y) \rightarrow (-x, -y)$<br>**Answer:** _____ |

17. How do you know when a transformations is a **DILATION**? _____

_____

18. How do you know when a transformation is a **TRANSLATION**? _____

_____

19. How do you know when a transformation is a **REFLECTION**? _____

_____

20. How do you know when a transformation is a **ROTATION**? _____

_____