

## Master

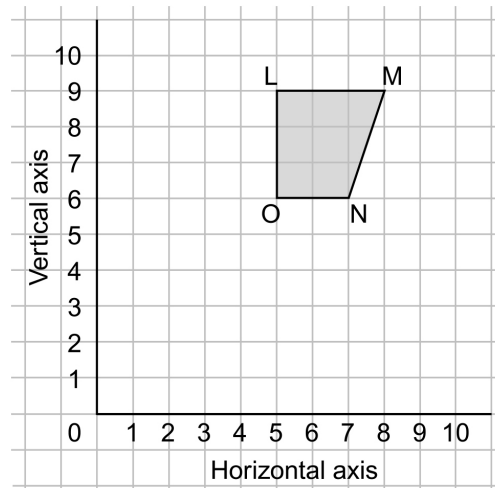
## Extra Practice 1

**Lesson 1: Transformations**

1. Draw an equilateral triangle on triangular dot paper.
  - a) Draw a mirror line.  
Draw the reflection of the figure in the mirror line.
  - b) Can you describe a different transformation that would move the figure onto the image? Explain.
  
2. Draw an irregular figure on grid paper.  
Choose a point inside the figure to be the turn centre.  
Draw the image of the figure after a rotation of  $90^\circ$  clockwise.

**Lesson 2: Combined Transformations**

Translate the figure 1 square left and 5 squares down.  
Rotate the translation image  $90^\circ$  counterclockwise about  $(4, 1)$ .  
Write the coordinates of the final image.

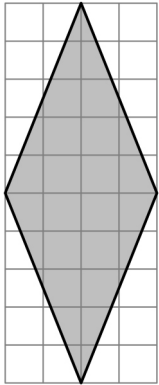


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## Extra Practice 2

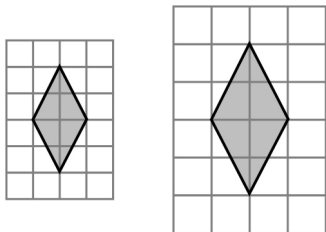
### Lesson 3: Congruent Figures

Draw lines to divide this figure into 4 congruent polygons.  
How do you know the polygons are congruent?



### Lesson 4: Similar Figures

Are these figures similar?  
How do you know?

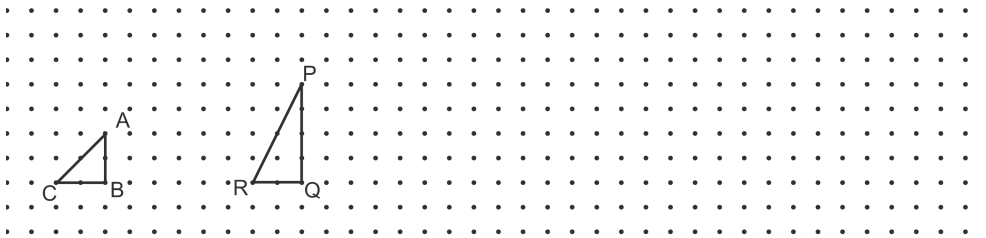


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**Extra Practice 3**

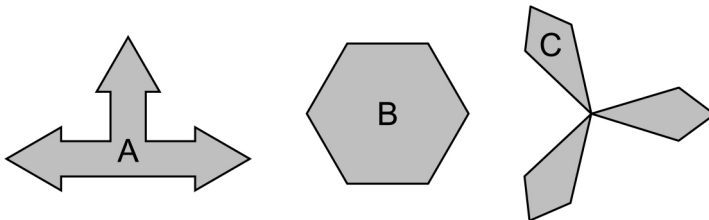
**Lesson 5: Dilatations**

1. Is  $\triangle PQR$  a dilatation image of  $\triangle ABC$ ? How do you know?



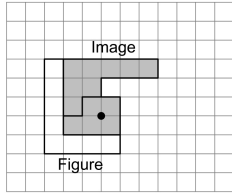
**Lesson 6: Rotational Symmetry**

1. Which figure has rotational symmetry of order 3? How do you know?



2. A

regular polygon has rotational symmetry of order 20.  
How many sides does the polygon have? How do you know?



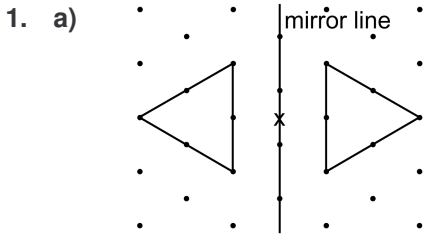
Date \_\_\_\_\_

**Master 7.30**

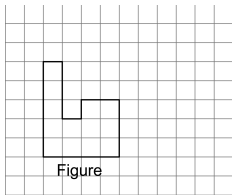
**Extra Practice Sample Answers**

**Extra Practice 1 – Master 7.27**

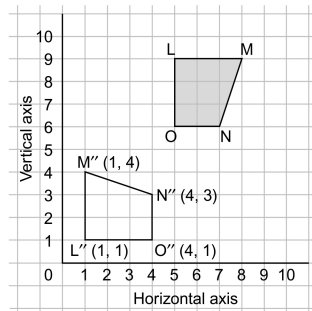
**Lesson 1**



b) A rotation of  $180^\circ$  around the point marked "x"

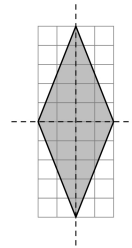


**Lesson 2**



**Extra Practice 2 – Master 7.28**

**Lesson 3**



The polygons have the same size and the same shape.

**Lesson 4**

Yes, the figures are similar. Corresponding angles are equal. Corresponding side lengths have the same number of units.

**Extra Practice 3 – Master 7.29**

**Lesson 5**

1. No; when I joined corresponding vertices, the lines did not meet up to form a dilatation centre. The figures are not similar.

**Lesson 6**

- Figure C; it would coincide with itself 3 times in one complete turn.
- 20; for a regular polygon, the number of sides is equal to the order of rotational symmetry.