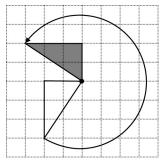
## **Section 1.3 Extra Practice**

Draw a line to match each rotation in #1 to #3 with the correct description.

1.



**A**  $90^{\circ}$  counterclockwise

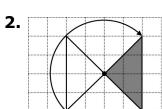
**B** 270° clockwise

C 180° clockwise

**D** 90° clockwise

**E** 180° counterclockwise

**F** 270° counterclockwise





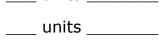
**4.** Describe the translations shown by the arrows.

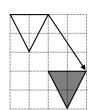
Example:

\_2\_ units <u>up</u>

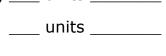


**a)** \_\_\_\_ units \_\_\_\_\_



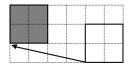


**b)** \_\_\_\_ units \_\_\_\_\_



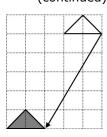
**c)** \_\_\_\_ units \_\_\_\_\_

\_\_\_\_ unit \_\_\_\_\_

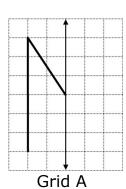


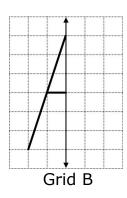
**d)** \_\_\_\_ units \_\_\_\_\_

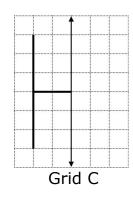
\_\_\_\_ units \_\_\_\_\_

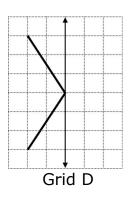


**5. a)** Draw the reflection image on each grid to complete the figure.









**b)** Identify each figure.

Grid A \_\_\_\_\_ Grid B \_\_\_\_\_

Grid C Grid D

c) Each of the letters has a vertical line of reflection. For which of the letters can you draw a horizontal line of reflection so that the letter reflects onto itself? \_\_\_\_\_

Draw these horizontal lines of reflection on the grids above.