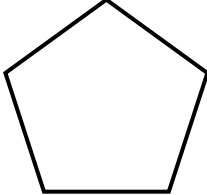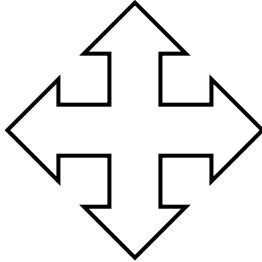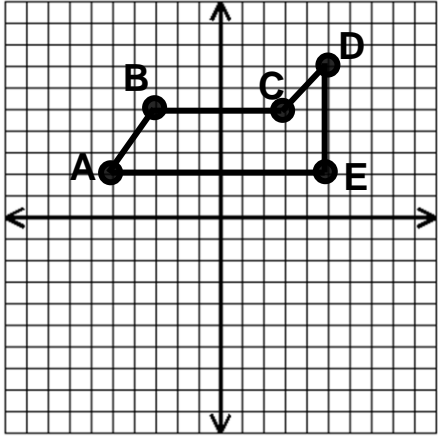NAME_____DATE_____PER.____

REFLECTIONS & SYMMETRY

Tell how many lines of symmetry each of the following objects has.
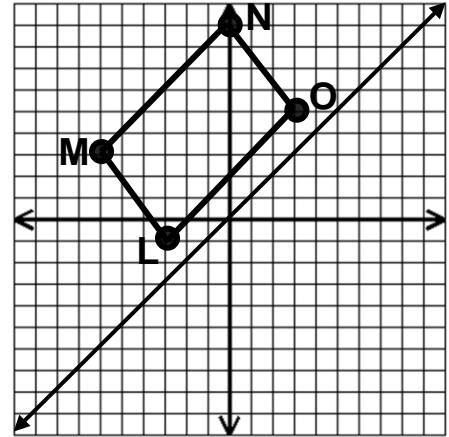
1. _____

2. _____

* **Figure is a regular pentagon.**

3. _____

DRAW the reflection of each of the following figures across the axis/line indicated list the new coordinates, and find the object indicated.

4. A'(_____, _____) D'(_____, _____)

   B'(_____, _____) E'(_____, _____)

   C'(_____, _____)

Reflect across the x-axis:
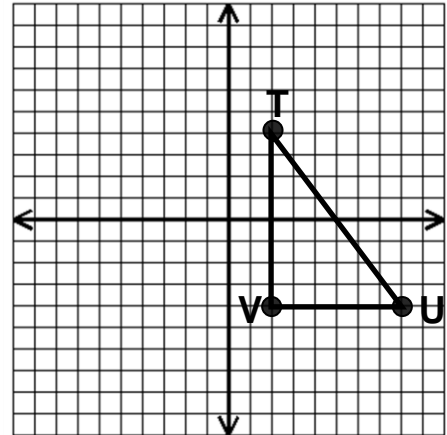
5. L'(_____, _____) N'(_____, _____)

    M'(_____, _____) O'(_____, _____)

Reflect across y = x:

6. T'(_____, _____)

    U'(_____, _____)

    V'(_____, _____)

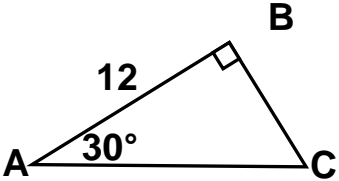Reflect across the y-axis:

7. _____

Which point is the reflection of (-3, -2) over the origin?

    A. (-3, -2)

    B. (3, -2)

    C. (-3, 2)

    D. (3, 2)

8. _____	Which point is the reflection of (-3, -2) over the y-axis?
	
	    A. (-3, -2)
	    B. (3, -2)
	    C. (-3, 2)
	    D. (3, 2)

9. _____	Which point is the reflection of (-4, -3) over the x-axis?
	
	    A. (-4, -3)
	    B. (4, -3)
	    C. (-4, 3)
	    D. (4, 3)

10. _____	Gail is using a coordinate plane to plan a garden. She draws a flower bed with vertices (3,1), (3,4), (-2,4), and (-2,1). Then she creates a second flower bed by reflecting the first one across the x-axis. Which of these is a vertex of the second flower bed?
	
	    A. (-2,-4)
	    B. (-3,1)
	    C. (2,1)
	    D. (-3,-4)

11. _____	When point B (- 5 ,2) is reflected in the line x = 2, where is the image located?
12. _____	When point B (- 5, 2) is reflected in the line y = -2, where is the image located?

Review.

13. _____ _____	Find BC and AC. B 12 30° A C
14. _____	$\triangle ABC$ is a right triangle. $m\angle A = 20°$, $m\angle B = 90°$, $AC = 8$, and $AB = 3$. Which expression could be used to find BC? A. $\dfrac{3}{\tan 70°}$ B. $\dfrac{8}{\sin 20°}$ C. $8 \tan 20°$ D. $3 \cos 70°$
15. _____	A building casts a shadow that is 85 ft. long when the angle of elevation to the sun is 34°. What is the height of the building to the nearest inch?
16. _____	What is the angle of elevation to the sun when the shadow of the building in #15 is 42 ft. 6 in. long? Round to the nearest degree.
17. _____	A triangle has side lengths 7, 12, and 13. Classify the triangle by angles.