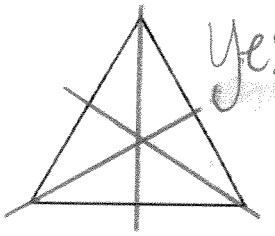
9-5 Symmetry Practice

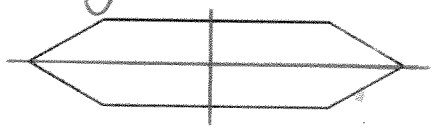
Name Master

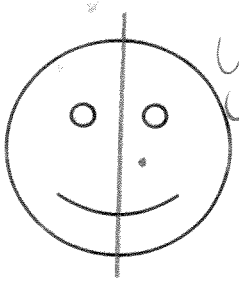
Date _____ Block _____

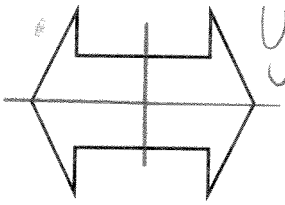
State whether the figure appears to have line symmetry. Write yes or no. If yes, then state the number of lines of symmetry (draw them to help answer the question).

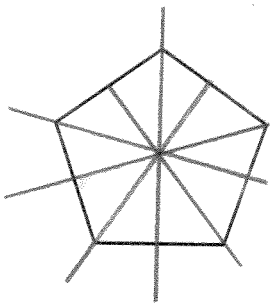
1.  Yes-3

2. No 

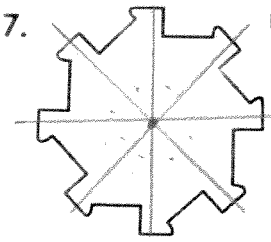
3. yes - 2 

4.  Yes-1

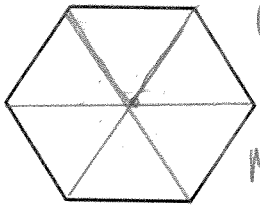
5.  Yes-2

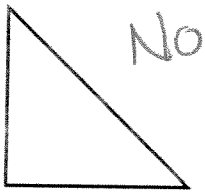
6.  Yes-5

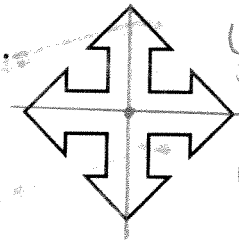
State whether the figure has rotational symmetry. Write yes or no. If yes, then locate the center of symmetry, and state the order and magnitude of symmetry.

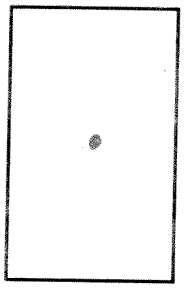
7.  Yes O-8 M-45°

8.  Yes O-2 M-180°

9.  Yes O-6 M-60°

10.  No

11.  yes O-4 M-90°

12.  yes O-2 M-180°

13. A paddle wheel on a steamboat is driven by a steam engine that rotates the paddles attached to the wheel to propel the boat through the water. If a paddle wheel consists of 18 evenly spaced paddles, identify the order and magnitute of its rotational symmetry. O-18 M-20°

14. Which of the figures above in #1-12, have point symmetry?

2, 3, 5, 7, 8, 9, 11, 12

Transformations Review

Given: Y(4, 4), O(7, 4), D(6, 1), & A(3, 1). Do the following transformations of ▱YODA. Label each transformation with the problem number written inside the transformation image.

1. **(x, y)→(x, y) – Already drawn for you ☺**
2. **Reflect YODA over y = x** *(Hint: draw y = x)* (y, x)
3. **Rotate YODA 90° counterclockwise** $(-y, x)$
4. **Reflect YODA over the y-axis** $(-x, y)$
5. [redacted] $(-x, -y)$
6. **(x, y)→(x - 7, y - 5)**
7. **Rotate YODA 90° clockwise** $(y, -x)$
8. **Reflect YODA over the x-axis** $(x, -y)$