$\qquad$ Class: $\qquad$
NC Math 2: Unit 1 Review Sheet

1. Translate the triangle 6 units right and

2. Rotate the triangle $270^{\circ}$ counterclockwise around the origin

3. Reflect the triangle over the line $y=-1$

4. Reflect the triangle over the x axis

5. Rotate the triangle $180^{\circ}$ around the point $(1,-1)$

6. Rotate the triangle $90^{\circ}$ counter-clockwise $(-3,-1)$


Make sure you know:
Vocabuary Words: Quadrilateral, Trapezoid, Rhombus
Algebraic Rules for Rotations and Reflections
Find the line of Reflection give a pre-image and image (see homework for practice)
7. What is the slope of a line that is parallel to $y=3 x-1$ ? What is the slope of a line that is perpenicular to $y=3 x-1 ?$


Perpendicular $m=-1 / 3$
8. What is the slope of a line that is parallel to $4 x-2 y=8$ ? What is the slope of a line that is perpenicular to $4 x-2 y=8$ ?

$$
y=2 x-4
$$

parallel $\quad m=2$
9. Which equation is parallel to $y=-8 x-3$ ?
A. $y=\frac{1}{8} x+4$
B. $-8 x+y=2$
C. $\frac{1}{8} x-y=1$
D. $y=-8 x-6$
10.
 Which equation is perpendicular to $y=-\frac{1}{6} x-5$ ?
A. $y=6 x-2$
B. $6 x+y=2$
C. $\frac{1}{6} x-y=-1$
D. $y=-6 x-3$
11. What is the difference between pre-image and an mage? before transformation

For questions 12-14, use the regular heptagon to the right.
12. List ALL the angles of rotation up to $360^{\circ}$ that will carry the figure onto itself.
$51.4^{\circ}, 122.9^{\circ}, 154.3^{\circ}, 205.7^{\circ}, 257 . .^{\circ}, 308.6^{\circ}, 360^{\circ}$
13. On the heptagon, draw the lines of symmetry that carry the figure onto itself.
14. How many lines of symmetry are there? $\qquad$


Determine if the images below have rotational symmetry, line symmetry, both, or none.


