

6.1. 9.1-9.5 STUDY GUIDE

GEOMETRY



Name: _____

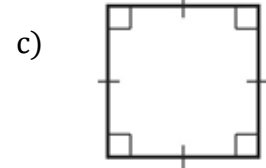
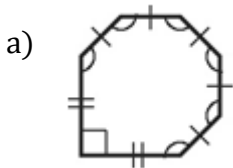
Target 6.1.a: Classify polygons based on their sides and angles.

Self-Assess: 1 (Uh oh) 2 3 (I am okay) 4 5 (I got this!!!)

Target 6.1.b: Determine if the polygon is regular, irregular, convex, or concave.

Self-Assess: 1 (Uh oh) 2 3 (I am okay) 4 5 (I got this!!!)

1) Name the polygon by the # of sides. Tell whether each figure is regular or irregular, concave or convex



Target 6.1.c: Find the sum of the interior angles of a polygon.

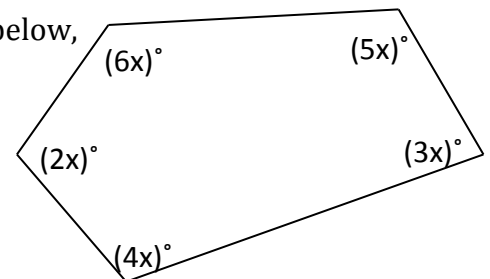
Self-Assess: 1 (Uh oh) 2 3 (I am okay) 4 5 (I got this!!!)

3) Find the sum of the interior angles of a pentadecagon.

4) Find the measure of each interior angle of a regular dodecagon.

5) If an interior angle of a regular polygon has a measure of 144° , what is the name of the polygon?

6) Using the pentagon below, find the value of x .



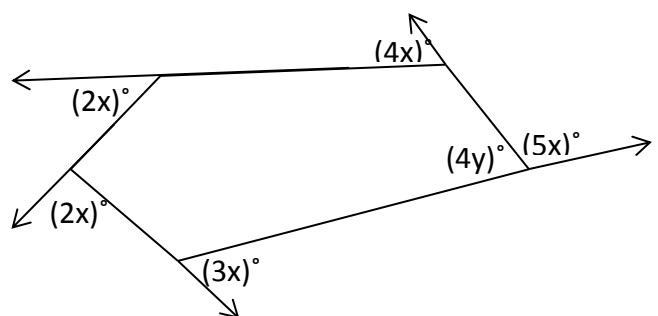
Target 6.1.d: Calculate the sum of the exterior angles of a polygon.

Self-Assess: 1 (Uh oh) 2 3 (I am okay) 4 5 (I got this!!!)

7) Find the sum of the exterior angles of a heptagon.

8) Find the measure of each exterior angle of a regular nonagon.

9) Given the pentagon to the right, find the value of x and y .



Target 9.1: Reflect a polygon across a line in the coordinate plane

Target 9.2: Translate a polygon along the given translation vector and in the coordinate plane

Target 9.3: Rotate a polygon about a given point and rotation angle and in the coordinate plane

Target 9.4: Perform a composition of transformations in the coordinate plane

Self-Assess: 1 (Uh oh)

2

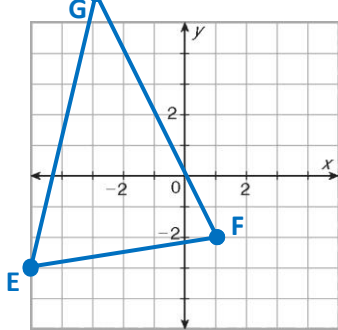
3 (I am okay)

4

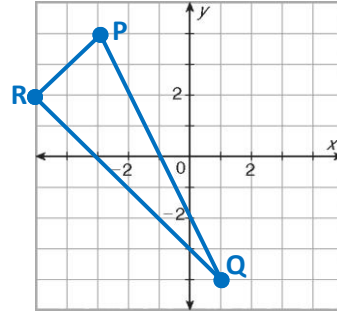
5 (I got this!!!)

Give the coordinates of the reflection. Write the function rule. (9.1)

10) E (-5, -3), F (1, -2), G (-3, 6); y - axis



11) P(-3, 4), Q (1, -4), R (-5, 2); y = x



Graph the following and graph the transformation given the vector. (9.2)

12) Describe the translation using vector $\langle -3, -1 \rangle$

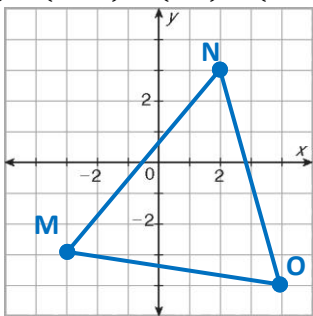
In words. Then write the vector using coordinate form.

13) If B is at (50, -20) and B' is at (-300, -40)

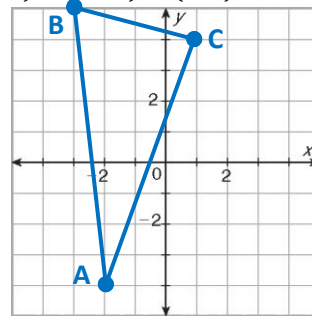
what is the translation vector in vector form?

Rotate the given vertices about the origin using the given angle of rotation. Write the function rule. (9.3)

14) M (-3, -3), N (2, 3), O (4, -4); -90°



15) A (-2, -4), B (-3, 5), C (1, 4); 180°



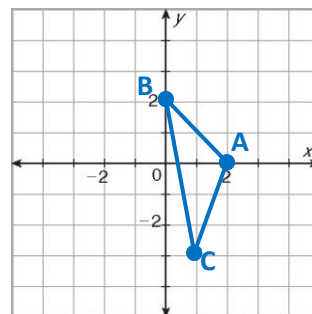
Complete the composition of transformations. Write as a composition of transformations. (9.4)

16) Point D (-2, -8) was mapped to point D' (-3, 4)

first by a reflection across the y-axis, and then by what translation vector?

17) Given $\triangle ABC$, A (2,0), B (0,2) and C (1, -3)

Rotate 90° then translate by vector $\langle -2, 4 \rangle$



Target 9.5: Rate a polygon about a given point and rotation angle and in the coordinate plane

Self-Assess: 1 (Uh oh)

2

3 (I am okay)

4

5 (I got this!!!)

State if the #39-40 has line symmetry (draw the L.O.S.) or rotational symmetry (give the angle and order).

18)



19)

