**Geometry Unit 2 Study Guide - Transformations**



1. In the graph at right,*∆R*’*Q*’*P*’ is a translation image of ∆*RQP.*

Write the rule for this translation.

1. Which of the following are isometries? EXPLAIN WHY: Translation, Reflection, Dilation, Rotation

For 3-6, write the NEW coordinates for the image of *ABC* for each transformation.

**3.** reflection across the x-axis

**4.** rotation of 90° clockwise about the origin

**5.** dilation with center (0, 0) and scale factor 3

**6.** reflected across the y-axis

 **7.** What is the image of point C(4, -3) after a reflection across the *y*-axis?

For questions 8-9, state whether each transformation is a reflection, rotation, translation, or dilation.

8. 9.

For questions 10 - 15, refer to the figure at the right.

**10.** What is the image of *F* under **11.** What rule describes

(*x*, *y*) → (*x* -2, *y* +0)? the translation *B* → *F*?

**12.** What is the image of Cunder **13.** What rule describes

(*x*, *y*) → (*x* − 2, *y* - 2)? the translation *D* → *A*?

**14.** What is the image of *G* under **15.** What rule describes

(*x*, *y*) → (*x* +8, *y* +2)? the translation *B* → *C*?

Write the coordinates for A’, B’, and C’ under the given transformation.

**16.** Δ*ABC* with vertices *A*(-2, 5), *B*(0, -1), *C*(2, 6); dilated by a factor of ½

**17.** Δ*ABC* with vertices *A*(1, 4), *B*(7, 0), *C*(5, 3); rotated clockwise 270°

**18.** Δ*ABC* with vertices *A*(−8, −3), *B*(−4, 2), *C*(3, 9); reflected across the line $y=-x$

**19.** Segment BC with endpoints **B (4, 9) and C (2, -1)** is rotated, and it becomes segment P’Q’ with endpoints **B’ (-9, 4) and C’ (1, 2)**. **How much was it rotated in a clockwise direction?**

**20.** ΔABC with vertices A (1, 5), B (4, 2), and C (5, 5) is rotated 180°. Graph ΔABC and ΔA’B’C’.

