**Dilations Homework - Honors Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Graph and label each figure and its image under the given reflection. Write the rule using formal notation.

1) Dilate $∆$QRS if Q(-1, 0), R(-1, 2), S(-2, 1) 2) Dilate $∆$TRK if T(-1, -2), R(1, 0), K(0, 1)
by a magnitude of 2 from the origin. by a magnitude of 3 from the origin.

 Q’ \_\_\_\_\_\_ T’ \_\_\_\_\_\_
 R’ \_\_\_\_\_\_ R’ \_\_\_\_\_\_

 S’ \_\_\_\_\_\_ K’ \_\_\_\_\_\_

 Rule: \_\_\_\_\_\_\_\_\_ Rule: \_\_\_\_\_\_\_\_\_

3) Dilate $∆$XYZ if X(-4, 0), Y(-4, 3), Z(-2, -2) 4) Dilate $∆$IBM if I(2, -4), B(1, 2), M(4, 1)
by a magnitude of $\frac{1}{2}$ from the origin. by a magnitude of $\frac{3}{2}$ from the origin.

 X’ \_\_\_\_\_\_ I’ \_\_\_\_\_\_
 Y’ \_\_\_\_\_\_ B’ \_\_\_\_\_\_

 Z’ \_\_\_\_\_\_ M’ \_\_\_\_\_\_

 Rule: \_\_\_\_\_\_\_\_\_ Rule: \_\_\_\_\_\_\_\_\_

Determine the scale factor that was used to dilate the following figures.

5) 6) 6)

Scale Factor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Scale Factor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Hint: Problems b and d will involve combining more than one of the prior transformations we have studied.**

