Name _____ Date _____

Check for Understanding

Represent Similarity with Proportions: Investigation 2

1. Determine whether each statement is true or false. *Circle true or false.*

A. Congruent figures have the same shape, but not necessarily the same size.

True False

B. Congruent figures have a scale factor of 1.

True False

C. If rigid motion transformations and a dilation with any scale factor other than 1 map a pre-image to an image, then the figures are similar but not congruent.

True False

2. After a dilation, $\overline{Q'R'}$ is the image of $\overline{QR}$. Match each set of segment lengths with the appropriate scale factor.

A. $QR = 18$ units, $Q'R' = 6$ units

B. $QR = 6$ units, $Q'R' = 24$ units

C. $QR = 4$ units, $Q'R' = 10$ units

D. $QR = 3$ units, $Q'R' = 11$ units

I. 2.5

II. $3\frac{2}{3}$

III. $\frac{1}{3}$

IV. 4

3. An equilateral triangle with sides of 8 centimeters is dilated in reference to the origin in order to form an equilateral triangle that has sides 4 centimeters in length. If (a, b) is a point on the original triangle, which are the coordinates of the corresponding point on the triangle that has been dilated?

A. $\left(-\frac{1}{2}a, -\frac{1}{2}b\right)$

B. $\left(\frac{1}{2}a, \frac{1}{2}b\right)$

C. $(2a, 2b)$

D. $(-2a, -2b)$

4. Describe the relationship between two figures that are similar.

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