Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_

Mr. Schlansky Geometry

***Ratio of Corresponding Sides***

1. The ratio of the corresponding sides of two similar polygons is 3:1. Find the ratio of their:
2. perimeters
3. areas
4. angles
5. The ratio of corresponding sides of two similar polygons is 2:7. Find the ratio of their:
6. perimeters
7. areas
8. angles
9. The ratio of the perimeters of two similar polygons is 5:2. Find the ratio of their:
10. corresponding sides
11. areas
12. angles
13. The ratio of the areas of two similar polygons is 9:4. Find the ratio of their:
14. corresponding sides
15. perimeters
16. angles

5. Two triangles are similar, and the ratio of each pair of corresponding sides is 2 : 1. Which statement regarding the two triangles is *not* true?

|  |  |
| --- | --- |
| 1) | Their areas have a ratio of 4 : 1. |
| 2) | Their altitudes have a ratio of 2 : 1. |
| 3) | Their perimeters have a ratio of 2 : 1. |
| 4) | Their corresponding angles have a ratio of 2 : 1. |

6. Given  such that . Which statement is *not* true?

|  |  |  |  |
| --- | --- | --- | --- |
| 1) |  | 3) |  |
| 2) |  | 4) |  |

7.  is similar to . The ratio of the length of  to the length of  is . Which ratio is also equal to ?

(1)  (2)  (3)  (4) 

8. Given , which statement is *not* always true?

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) | area of  area of |
| 4) | perimeter of  perimeter of |

9. Triangle *RJM* has an area of 6 and a perimeter of 12. If the triangle is dilated by a scale factor of 3 centered at the origin, what are the area and perimeter of its image, triangle *R'J'M'*?

|  |  |
| --- | --- |
| 1) | area of 9 and perimeter of 15 |
| 2) | area of 18 and perimeter of 36 |
| 3) | area of 54 and perimeter of 36 |
| 4) | area of 54 and perimeter of 108 |

10. Rectangle *A'B'C'D'* is the image of rectangle *ABCD* after a dilation centered at point *A* by a scale factor of . Which statement is correct?

|  |  |
| --- | --- |
| 1) | Rectangle *A'B'C'D'* has a perimeter that is  the perimeter of rectangle *ABCD*. |
| 2) | Rectangle *A'B'C'D'* has a perimeter that is  the perimeter of rectangle *ABCD*. |
| 3) | Rectangle *A'B'C'D'* has an area that is  the area of rectangle *ABCD*. |
| 4) | Rectangle *A'B'C'D'* has an area that is  the area of rectangle *ABCD*. |

11. A triangle is dilated by a scale factor of 3 with the center of dilation at the origin. Which statement is true?

|  |  |
| --- | --- |
| 1) | The area of the image is nine times the· area of the original triangle. |
| 2) | The perimeter of the image is nine times the perimeter of the original triangle. |
| 3) | The slope of any side of the image is three times the slope of the corresponding side of the original triangle. |
| 4) | The measure of each angle in the image is three times the measure of the corresponding angle of the original triangle. |

12. If  is dilated by a scale factor of 3, which statement is true of the image ?

|  |  |
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| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |