

Scale Factor with Perimeter and Area

1.	The scale	factor of a	triangle	dilation	is 3.	What is	the scale	factor o	f their:
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- 2. The ratio of the sides of similar triangles is 5:1. What is the ratio of their:

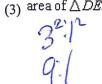
 - a) perimeters 52 | b) areas 52 | 22 25 1 | c) angles 11 |
- 3. The scale factor of a triangle dilation is $\frac{1}{2}$. What is the scale factor of their:
- 4. The ratio of the sides of similar triangles is 4:3. What is the ratio of their:
 - a) perimeters 4:3 b) areas 42:32=16:9

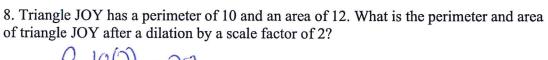
 - c) angles
- 5. Two triangles are similar, and the ratio of each pair of corresponding sides is 2:1. Which statement regarding the two triangles is not true?
- 1) Their areas have a ratio of 4:1. $2^{2!} |^2 = 4!$
- 2) Their altitudes have a ratio of 2:1.
- 3) Their perimeters have a ratio of 2:1.
- 4) Their corresponding angles have a ratio of 2:1. × 1:1
- 6. Given $\triangle ABC \sim \triangle DEF$ such that $\frac{AB}{DE} = \frac{3}{2}$. Which statement is *not* true?

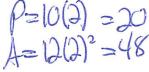
 1) $\frac{BC}{EF} = \frac{3}{2}$ 3) $\frac{\text{area of } \triangle ABC}{\text{area of } \triangle DEF} = \frac{9}{4}$ 2) $\frac{\text{m} \angle A}{\text{m} \angle D} = \frac{3}{2}$ 4) $\frac{\text{perimeter of } \triangle ABC}{\text{perimeter of } \triangle DEF} = \frac{3}{2}$
- $\frac{2}{m \angle A} = \frac{3}{2}$

- 7. $\triangle ABC$ is similar to $\triangle DEF$. The ratio of the length of \overline{AB} to the length of \overline{DE} is 3:1. Which ratio is also equal to 3:1?
- $(1) \frac{m\angle A}{m\angle D} \qquad \frac{m\angle B}{m\angle F}$

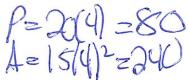
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9. Quadrilateral CAMI has a perimeter of 20 and an area of 15. What is the perimeter and area of quadrilateral CAMI after a dilation by a scale factor of 4?



10. 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
- 1=1213) =36 A=6(3)=54
- 11. Rectangle A'B'C'D' is the image of rectangle ABCD after a dilation centered at point A by a scale factor of $\frac{2}{3}$. Which statement is correct?
- Rectangle A'B'C'D' has a perimeter that is $\frac{2}{3}$ the perimeter of rectangle ABCD.
- Rectangle A'B'C'D' has a perimeter that is $\frac{3}{2}$ the perimeter of rectangle ABCD.
- Rectangle A'B'C'D' has an area that is $\frac{2}{3}$ the area of rectangle ABCD.
- 4) Rectangle A'B'C'D' has an area that is $\frac{3}{2}$ the area of rectangle ABCD.
- 12. 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. 3^{29}
- 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.