

Name _____
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Date _____
Geometry



Ratios with Perimeter and Area

1. The scale factor of a triangle dilation is 3. What is the scale factor of their:
 - a) perimeters
 - b) areas
 - c) angles
2. The ratio of the sides of similar triangles is 5:1. What is the ratio of their:
 - a) perimeters
 - b) areas
 - c) angles
3. The scale factor of a triangle dilation is $\frac{1}{2}$. What is the scale factor of their:
 - a) perimeters
 - b) areas
 - c) angles
4. The ratio of the sides of similar triangles is 4:3. What is the ratio of their:
 - a) perimeters
 - b) areas
 - 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) 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 $\triangle ABC \sim \triangle DEF$ such that $\frac{AB}{DE} = \frac{3}{2}$. Which statement is *not* true?
 - 1) $\frac{BC}{EF} = \frac{3}{2}$
 - 2) $\frac{m\angle A}{m\angle D} = \frac{3}{2}$
 - 3) $\frac{\text{area of } \triangle ABC}{\text{area of } \triangle DEF} = \frac{9}{4}$
 - 4) $\frac{\text{perimeter of } \triangle ABC}{\text{perimeter of } \triangle DEF} = \frac{3}{2}$
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) $\frac{m\angle A}{m\angle D}$
 - (2) $\frac{m\angle B}{m\angle F}$
 - (3) $\frac{\text{area of } \triangle ABC}{\text{area of } \triangle DEF}$
 - (4) $\frac{\text{perimeter of } \triangle ABC}{\text{perimeter of } \triangle DEF}$