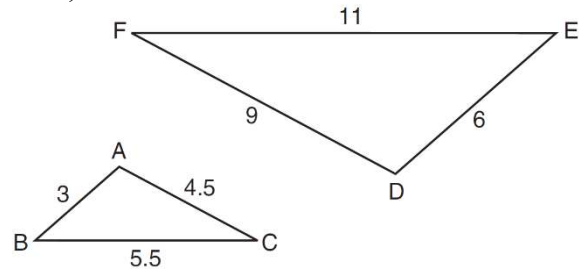


Name _____
Mr. Schlansky

Date _____
Geometry

Corresponding Parts of Similar Triangles

1. In the diagram below, $\triangle DEF$ is the image of $\triangle ABC$ after a clockwise rotation of 180° and a dilation where $AB = 3$, $BC = 5.5$, $AC = 4.5$, $DE = 6$, $FD = 9$, and $EF = 11$.



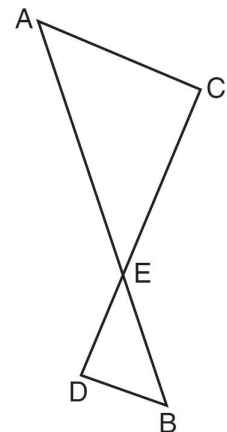
Which relationship must always be true?

- 1) $\frac{m\angle A}{m\angle D} = \frac{1}{2}$
- 2) $\frac{m\angle C}{m\angle F} = \frac{2}{1}$
- 3) $\frac{m\angle A}{m\angle C} = \frac{m\angle F}{m\angle D}$
- 4) $\frac{m\angle B}{m\angle E} = \frac{m\angle C}{m\angle F}$

2. Given that $\triangle DEF \sim \triangle HIJ$, which is the correct statement about their corresponding sides?

- 1) $\frac{EF}{IJ} = \frac{DE}{HI} = \frac{DF}{HJ}$
- 2) $\frac{EF}{HI} = \frac{IJ}{DE} = \frac{DF}{HJ}$
- 3) $\frac{DE}{HI} = \frac{EF}{HJ} = \frac{DF}{IJ}$
- 4) $\frac{DE}{JI} = \frac{EF}{HJ} = \frac{FD}{HI}$

3. As shown in the diagram below, \overline{AB} and \overline{CD} intersect at E , and $\overline{AC} \parallel \overline{BD}$.



Given $\triangle AEC \sim \triangle BED$, which equation is true?

- 1) $\frac{CE}{DE} = \frac{EB}{EA}$
- 2) $\frac{AE}{BE} = \frac{AC}{BD}$
- 3) $\frac{EC}{AE} = \frac{BE}{ED}$
- 4) $\frac{ED}{EC} = \frac{AC}{BD}$

4. Scalene triangle ABC is similar to triangle DEF . Which statement is *false*?

- 1) $AB:BC = DE:EF$
- 2) $AC:DF = BC:EF$
- 3) $\angle ACB \cong \angle DFE$
- 4) $\angle ABC \cong \angle EDF$

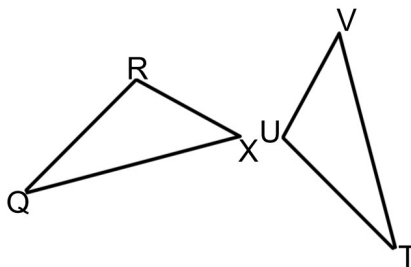
5. In the diagram below, $\triangle QRX \sim \triangle TUV$. Which of the following statements is *not* true?

1) $\frac{\overline{QR}}{\overline{TU}} = \frac{\overline{QX}}{\overline{TV}}$

2) $\frac{\angle X}{\angle V} = \frac{\angle Q}{\angle T}$

3) $\frac{\overline{RX}}{\overline{UV}} = \frac{\overline{VT}}{\overline{XQ}}$

4) $\frac{\overline{QX}}{\overline{QR}} = \frac{\overline{TV}}{\overline{TU}}$



6. In the diagram below, $\triangle ABC \sim \triangle RST$.

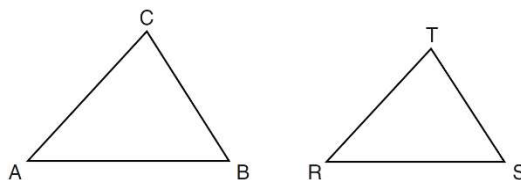
Which statement is *not* true?

1) $\angle A \cong \angle R$

2) $\frac{\overline{AB}}{\overline{RS}} = \frac{\overline{BC}}{\overline{ST}}$

3) $\frac{\overline{AB}}{\overline{BC}} = \frac{\overline{ST}}{\overline{RS}}$

4) $\frac{\overline{AB} + \overline{BC} + \overline{AC}}{\overline{RS} + \overline{ST} + \overline{RT}} = \frac{\overline{AB}}{\overline{RS}}$



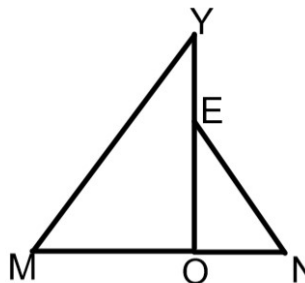
7. In the diagram below, $\triangle MOY$ is the image of $\triangle NOE$ after a dilation followed by a reflection. Which of the following statements is true?

1) $\frac{\overline{MO}}{\overline{ON}} = \frac{\overline{NE}}{\overline{MY}}$

2) $\frac{\text{perimeter } MOY}{\text{perimeter } NOE} = \frac{\overline{EN}}{\overline{YM}}$

3) $\frac{\angle M}{\angle N} = \frac{\angle Y}{\angle E}$

4) $\frac{\text{area } MOY}{\text{area } NOE} = \frac{\overline{YM}}{\overline{EN}}$



8. In the diagram below of right triangle AED , $\overline{BC} \parallel \overline{DE}$.

Which statement is always true?

1) $\frac{\overline{AC}}{\overline{BC}} = \frac{\overline{DE}}{\overline{AE}}$

2) $\frac{\overline{AB}}{\overline{AD}} = \frac{\overline{BC}}{\overline{DE}}$

3) $\frac{\overline{AC}}{\overline{CE}} = \frac{\overline{BC}}{\overline{DE}}$

4) $\frac{\overline{DE}}{\overline{BC}} = \frac{\overline{DB}}{\overline{AB}}$

