

Name Schlansky
Mr. Schlansky

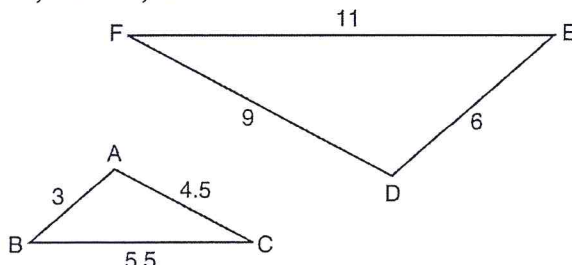
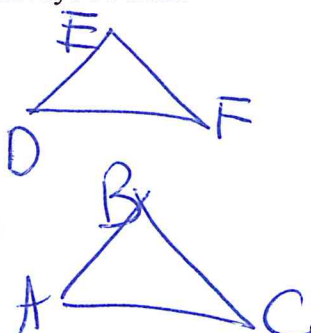
Date _____
Geometry

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?

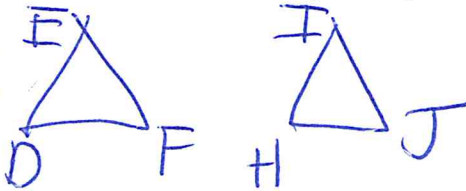
- 1) $\frac{m\angle A}{m\angle D} = \frac{1}{2}$ ~~X~~
 2) $\frac{m\angle C}{m\angle F} = \frac{2}{1}$ ~~X~~
 3) $\frac{m\angle A}{m\angle C} = \frac{m\angle F}{m\angle D}$ ~~X~~
 4) $\frac{m\angle B}{m\angle E} = \frac{m\angle C}{m\angle F}$ ✓



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) $\frac{EF}{HI} = \frac{IJ}{DE} = \frac{DF}{HJ}$ ~~X~~

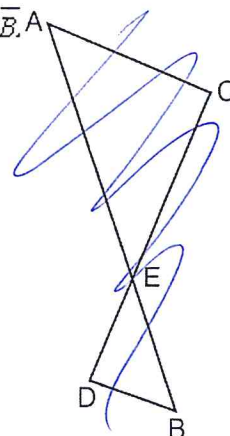
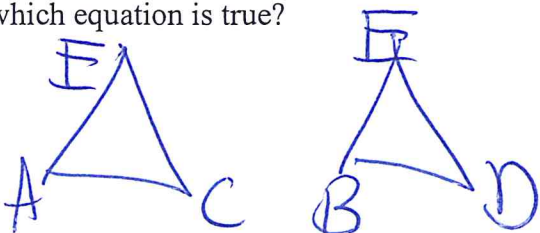
- 3) $\frac{DE}{HI} = \frac{EF}{HJ} = \frac{DF}{IJ}$ ~~X~~
 4) $\frac{DE}{JI} = \frac{EF}{HJ} = \frac{FD}{HI}$ ~~X~~



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

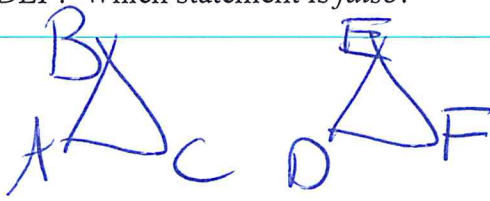
Given $\triangle AEC \sim \triangle BED$, which equation is true?

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



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

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



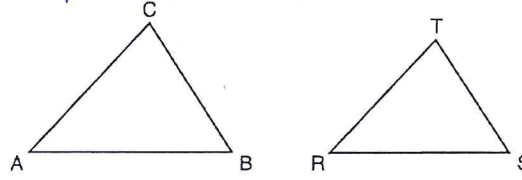
5. In the diagram below, $\triangle QRX \sim \triangle TUV$. Which of the following statements is *not* true?

1) $\frac{QR}{TU} = \frac{QX}{TV}$ ✓
 2) $\frac{\angle X}{\angle V} = \frac{\angle Q}{\angle T}$ ✓
 3) $\frac{RX}{UV} = \frac{VT}{XQ}$ ✗
 4) $\frac{QX}{QR} = \frac{TV}{TU}$ ✓

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

Which statement is *not* true?

- 1) $\angle A \cong \angle R$ ✓
 2) $\frac{AB}{RS} = \frac{BC}{ST}$ ✓
 3) $\frac{AB}{BC} = \frac{ST}{RS}$ ✗
 4) $\frac{AB+BC+AC}{RS+ST+RT} = \frac{AB}{RS}$ ✓



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) $\frac{MO}{ON} = \frac{NE}{MY}$ ✗
 2) $\frac{\text{perimeter } MOY}{\text{perimeter } NOE} = \frac{EN}{YM}$ ✗
 3) $\frac{\angle M}{\angle N} = \frac{\angle Y}{\angle E}$ ✓
 4) $\frac{\text{area } MOY}{\text{area } NOE} = \left(\frac{YM}{EN}\right)^2$ ✗

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

Which statement is always true?

- 1) $\frac{AC}{BC} = \frac{DE}{AE}$ ✗
 2) $\frac{AB}{AD} = \frac{BC}{DE}$ ✓
 3) $\frac{AC}{CE} = \frac{BC}{DE}$ ✗
 4) $\frac{DE}{BC} = \frac{DB}{AB}$ ✗

