

To determine if a proportion is correct

Look at the letters vertically and horizontally

One direction, the letters should correspond

Second direction, the letters should be in the same triangle

*It does not matter which direction does which

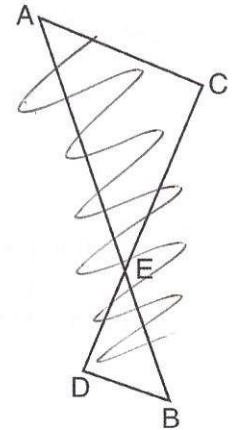
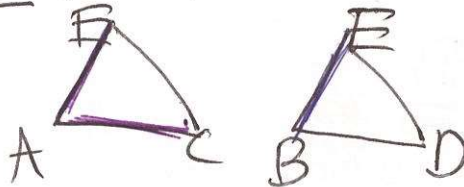
1. As shown in the diagram below, \overline{AB} and \overline{CD} intersect at E , and $\overline{AC} \parallel \overline{BD}$.
Given $\triangle AEC \sim \triangle BED$, which equation is true?

1) $\frac{CE}{DE} = \frac{EB}{EA}$

2) $\frac{AE}{BE} = \frac{AC}{BD}$

3) $\frac{EC}{AE} = \frac{BE}{ED}$

4) $\frac{ED}{EC} = \frac{AC}{BD}$



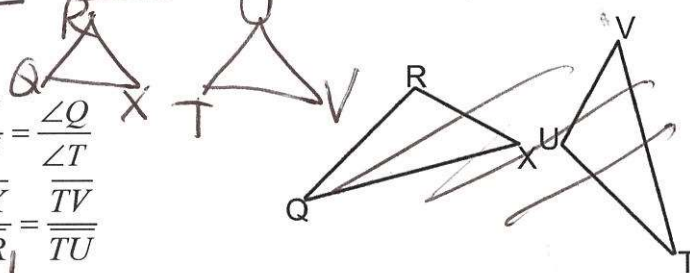
2. In the diagram below, $\triangle QRX \sim \triangle TVU$. Which of the following statements is *not* true?

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



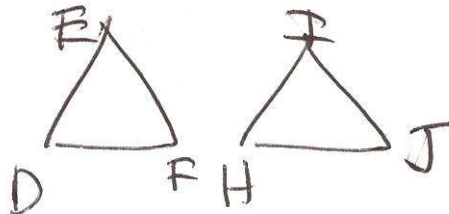
3. Given that $\triangle DEF \sim \triangle HIJ$, which is the correct statement about their corresponding sides?

1) $\frac{EF}{IJ} = \frac{DE}{HI}$

2) $\frac{DE}{HJ} = \frac{EF}{HI}$

3) $\frac{EF}{HI} = \frac{IJ}{DE}$

4) $\frac{DE}{JI} = \frac{EF}{HJ}$



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

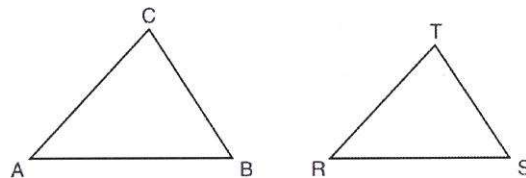
Which statement is *not* true?

1) $\angle A \cong \angle R$ ✓

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

3) $\frac{AB}{BC} = \frac{ST}{RS}$ ✗

4) $\angle B \cong \angle S$ ✓



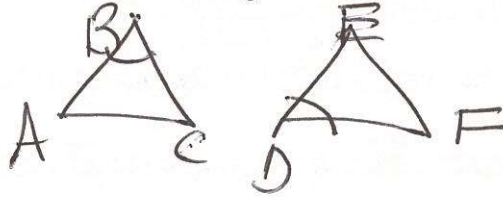
5. Scalene triangle ABC is similar to triangle DEF . Which statement is false?

1) $\frac{AB}{BC} = \frac{DE}{EF}$

2) $\frac{AC}{BC} = \frac{DF}{EF}$

3) $\angle ACB \cong \angle DFE$

4) $\angle ABC \cong \angle EDF$



6. Given right triangle ABC with a right angle at C , $m\angle B = 61^\circ$. Given right triangle RST with a right angle at T , $m\angle R = 29^\circ$.

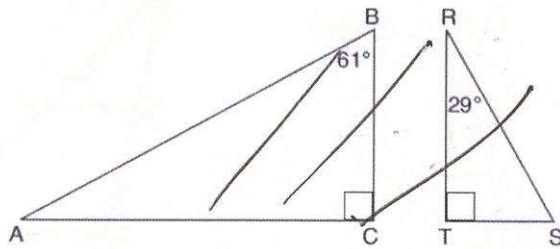
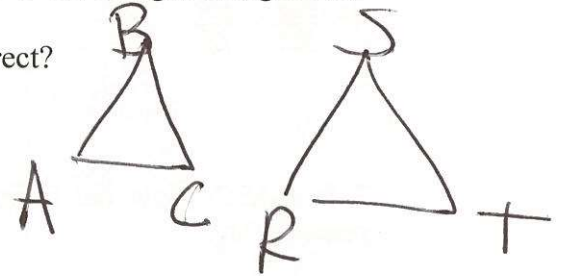
Which proportion in relation to $\triangle ABC$ and $\triangle RST$ is not correct?

1) $\frac{AB}{RS} = \frac{RT}{AC}$

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

3) $\frac{BC}{ST} = \frac{AC}{RT}$

4) $\frac{AB}{AC} = \frac{RS}{RT}$



7. 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?

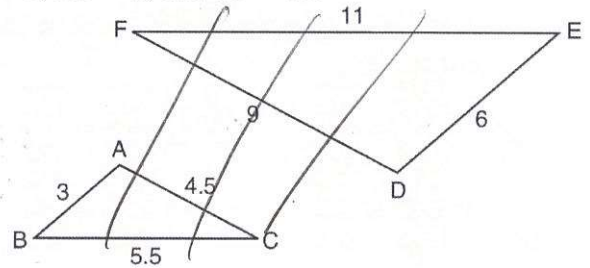
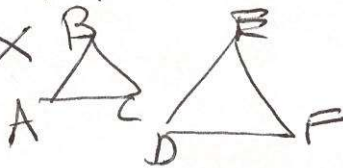
1) $\frac{m\angle A}{m\angle D} = \frac{1}{2}$

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) $\frac{m\angle B}{m\angle E} = \frac{m\angle C}{m\angle F}$

angles are always in 1:1 ratio



8. In the diagram below of isosceles triangle AHE with the vertex angle at H , $\overline{CB} \perp \overline{AE}$ and $\overline{FD} \perp \overline{AE}$.

Which statement is always true?

1) $\frac{AH}{AC} = \frac{EH}{EF}$

2) $\frac{AC}{EF} = \frac{AB}{ED}$

3) $\frac{AB}{ED} = \frac{CB}{FE}$

4) $\frac{AD}{AB} = \frac{BE}{DE}$

