

Chapter 7 Review

Do you know the ...

Definition of a ratio?	
Definition of a proportion?	
Definition of means of a proportion?	
Definition of extremes of a proportion?	
4 properties of proportions?	

Do you know the ...

Definition of CPST?	
Definition of CPSP?	
Definition of scale factor?	
Difference between CPCT and CPST?	

Do you know the ...

AA Similarity Postulate?	
Definition of CPSP?	
SAS Similarity Theorem?	
SSS Similarity Theorem?	
Difference between SSS congruence, SSS inequality, and SSS similarity postulates and theorems?	

Do you know the ...

Definition of term 'divided proportionally'?	
Triangle Proportionality Theorem?	
If 3 \parallel lines intersect two transversals, then ...	
Triangle Angle-Bisector Theorem?	

Find the value of X

$$1. \quad \frac{3}{4} = \frac{12}{x}$$

$$2. \quad \frac{9}{27} = \frac{x}{7}$$

$$3. \quad \frac{x-4}{7} = \frac{1}{x+2}$$

Equivalent Proportions

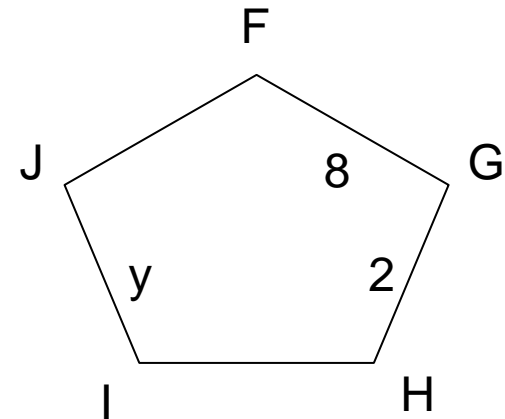
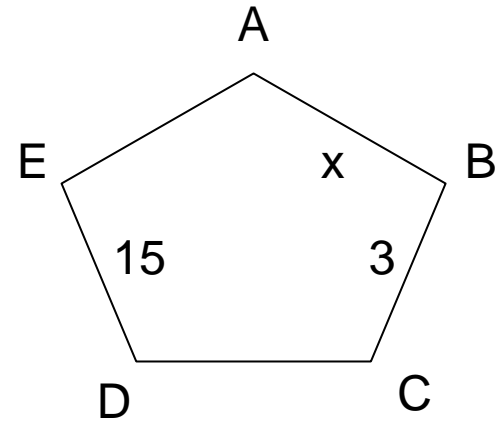
- Using the properties of proportions, identify 4 equivalent proportions to:

$$\frac{4}{x} = \frac{y}{7}$$

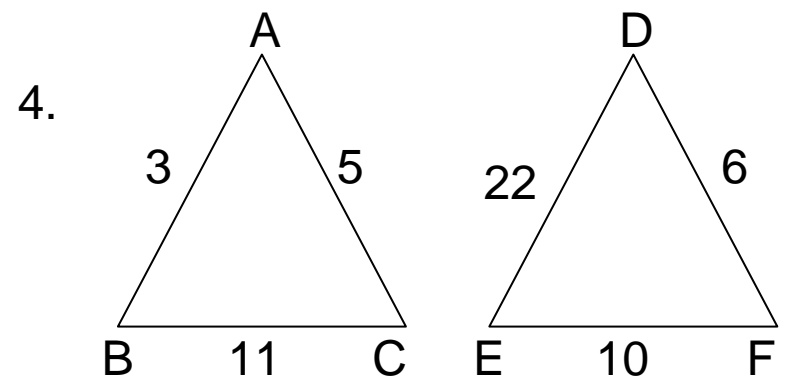
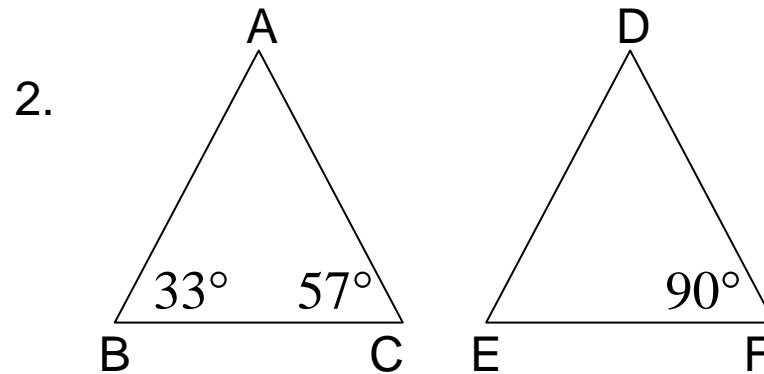
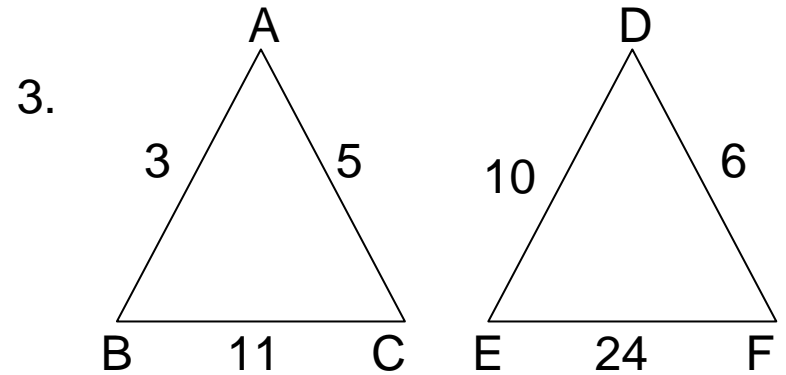
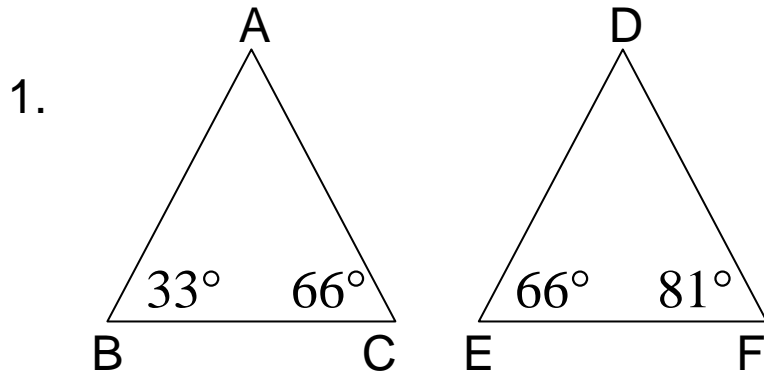
Similar Polygons

Given that pentagon ABCDE is similar to pentagon FGHIJ, find each of the following:

1. The scale factor
2. $X = ?$
3. $Y = ?$

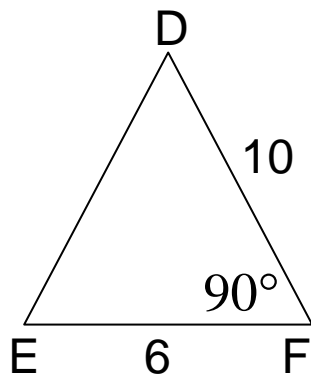
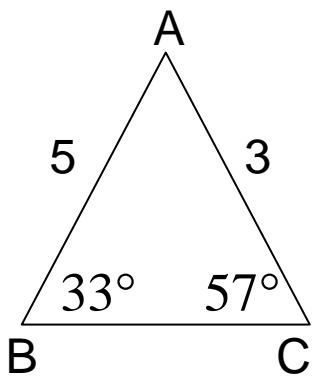


Identify the similar triangles, if any!



Identify the similar triangles, if any!

5.



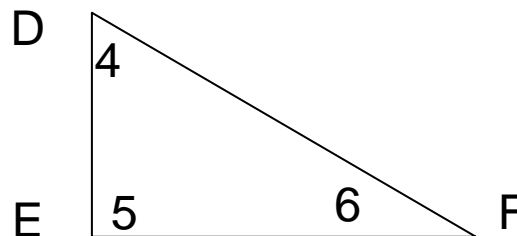
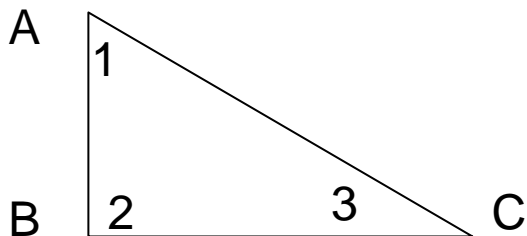
Ratios

- Find the measures of the angles of a triangle if the angles have a ratio of 2:4:6.

Triangle Relationships

- Given the two triangles and the added information, determine what triangles, if any, are congruent, unequal, or similar.
- If they are congruent, unequal, or similar, list the triangles in the proper relationship and give a theorem or postulate to support your answer.
- If nothing can be concluded, state this.

Triangle Relationships



If $\angle 1 \cong \angle 4$, $AB = 6$, $AC = 14$, $DE = 3$, $DF = 7$, then _____ by _____.

If $\angle 1 < \angle 4$, $AB = 6$, $AC = 14$, $DE = 6$, $DF = 14$, then _____ by _____.

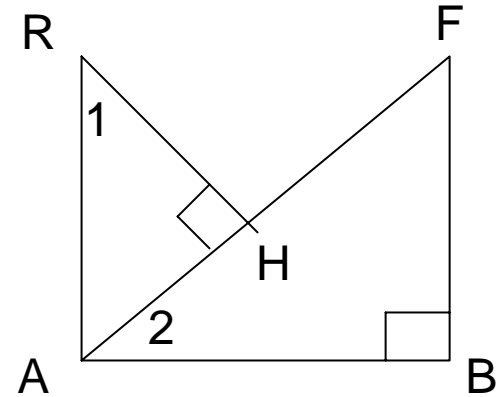
If $\angle 1 \cong \angle 4$, $AB = 6$, $AC = 14$, $EF = 3$, $DF = 7$, then _____ by _____.

If $AB = 6$, $AC = 14$, $BC = 8$, $DE = 7$, $DF = 4$, $EF = 3$, then _____ by _____.

Proof

Given : $\overline{AB} \perp \overline{BF}$; $\overline{RH} \perp \overline{AF}$; $\angle 1 \cong \angle 2$

Prove : $HR \bullet BF = BA \bullet HA$



Triangle Proportionality

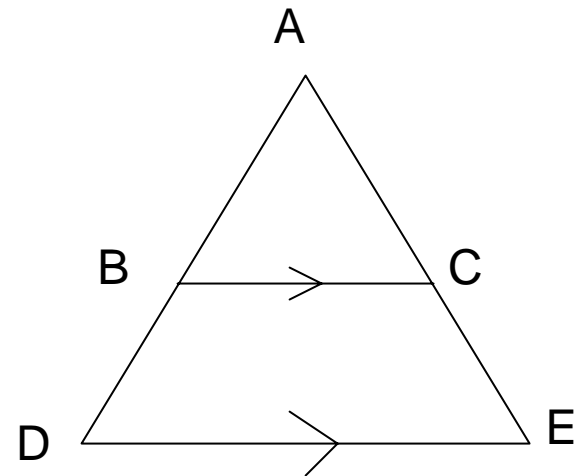
- Given the diagram and the supporting information, find the remaining value, if possible.

$$AB = 3, BD = 5, AC = 5$$

$$AD = _, CE = _, AE = _$$

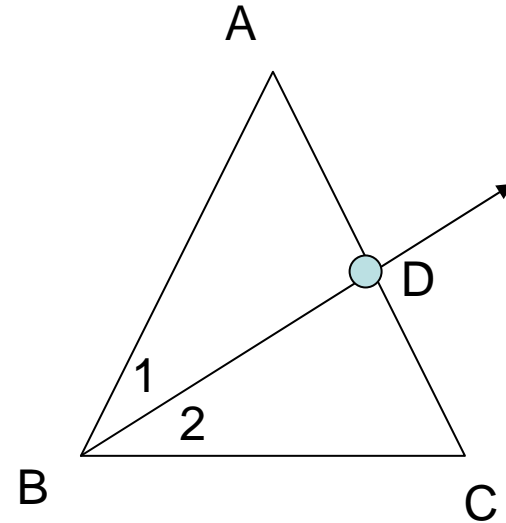
$$BC = 2, DE = 5, AB = 9, CE = 1$$

$$BD = _, AD = _, AE = _, AC = _$$



Triangle Angle-Bisector

Given : $\angle 1 \cong \angle 2$



If $AD = 4$, $AC = 7$, $AB = x$, $BC = 14$, find x .

If $AC = 21$, $AB = 3$, $BC = 5$, find AD and DC .