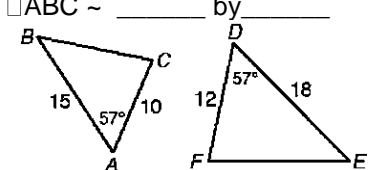
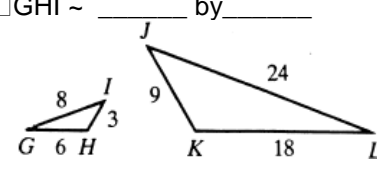
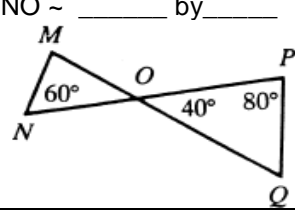
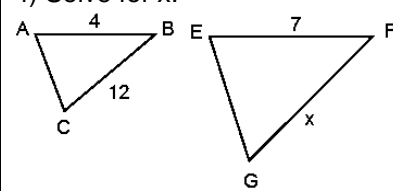
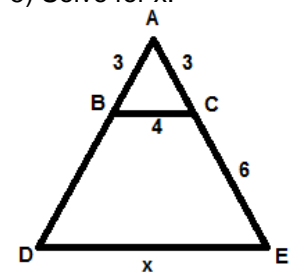
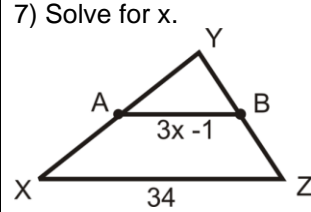
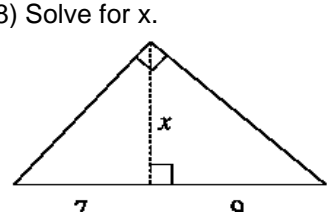
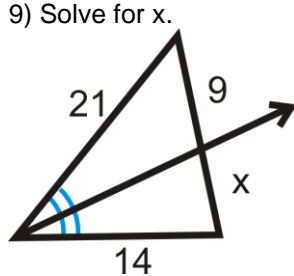


Name: _____

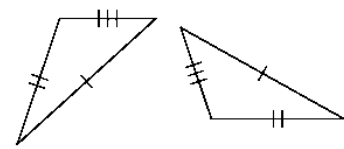
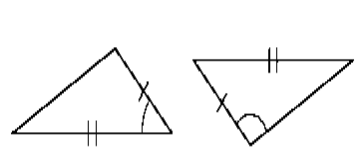
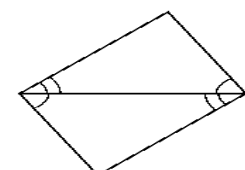
Block: _____

Vocabulary: SSS, SAS, ASA, AAS, HL, CPCTC, Reflexive Property, Definition of a Midpoint, Midsegment.

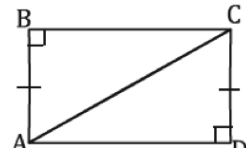
Determine if the following triangles are similar. (SSS, AA, SAS, None)

<p>1) $\triangle ABC \sim$ _____ by _____</p> 	<p>2) $\triangle GHI \sim$ _____ by _____</p> 	<p>3) $\triangle MNO \sim$ _____ by _____</p> 
<p>4) Solve for x.</p> 	<p>5) Solve for x.</p> 	<p>6) If a 42.9 ft tall flagpole casts a 253.1 ft long shadow, then how long is the shadow that a 6.2 ft. tall woman casts?</p>
<p>7) Solve for x.</p> 	<p>8) Solve for x.</p> 	<p>9) Solve for x.</p> 

Determine if the following triangles are congruent. (SSS, SAS, ASA, AAS, HL, None)

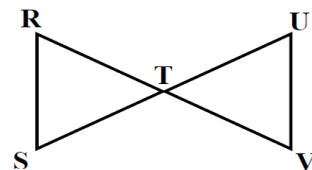
<p>10)</p> 	<p>11)</p> 	<p>12)</p> 
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13) Given: $\overline{AB} \cong \overline{DC}$ Prove: $\triangle ABC \cong \triangle CDA$



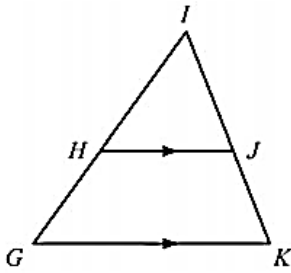
Statements	Reasons
1. $\overline{AB} \cong \overline{DC}$	1.
2. $\overline{AC} \cong \overline{AC}$	2.
3. $\angle ABC$ & $\angle CDA$ are right angles.	3.
4. $\angle ABC \cong \angle CDA$	4.
5. $\triangle ABC \cong \triangle CDA$	5.

14) Given: $\overline{RT} \cong \overline{TV}$, $\overline{ST} \cong \overline{TU}$ Prove: $\angle TSR \cong \angle TUV$



Statements	Reasons
1. $\overline{RT} \cong \overline{TV}$	1.
2.	2. Given
3. $\angle RTS \cong \angle VTU$	3.
4. $\triangle RTS \cong \triangle VTU$	4.
5. $\angle TSR \cong \angle TUV$	5.

1) Use this triangle to answer the question.



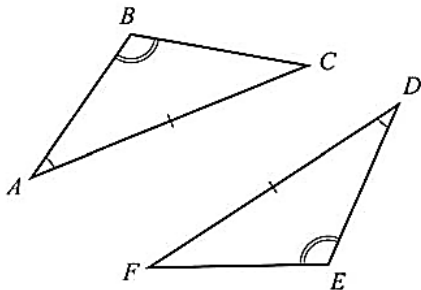
This is a proof of the statement “If a line is parallel to one side of a triangle and intersects the other two sides at distinct points, then it separates these sides into segments of proportional lengths.”

Step	Statement	Justification
1	\overline{GK} is parallel to \overline{HJ} .	Given
2	$\angle HGK \cong \angle IHJ$ $\angle IKG \cong \angle IJH$?
3	$\triangle GIK \sim \triangle HJ I$	AA Similarity
4	$\frac{IG}{IH} = \frac{IK}{IJ}$	Corresponding sides of similar triangles are proportional.
5	$\frac{HG + IH}{IH} = \frac{JK + IJ}{IJ}$	Segment Addition Postulate
6	$\frac{HG}{IH} = \frac{JK}{IJ}$	Subtraction Property of Equality

Which reason justifies step 2?

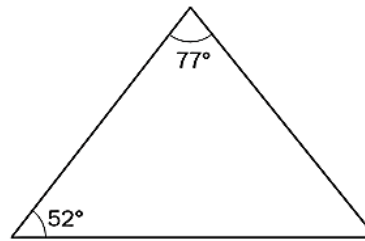
- A. Alternate interior angles are congruent.
- B. Alternate exterior angles are congruent.
- C. Corresponding angles are congruent.
- D. Vertical angles are congruent.

3) Which can be used to prove the triangles are congruent?

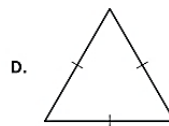
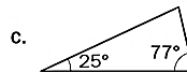
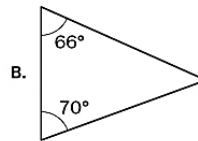
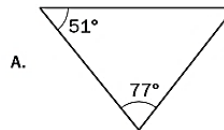


- A. SSS
- B. ASA
- C. SAS
- D. AAS

2) Look at the triangle.



Which triangle is similar to the given triangle?



Answers

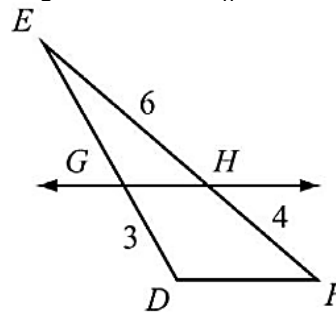
1) _____

2) _____

3) _____

4) _____

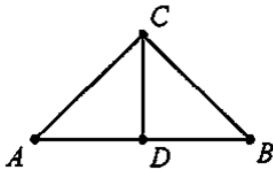
4) In the triangle shown, $GH \parallel DF$.



What is the length of GE?

- A. 2.0
- B. 4.5
- C. 7.5
- D. 8.0

5) In the diagram, CD is the perpendicular bisector of AB . The two-column proof shows that AC is congruent to BC .

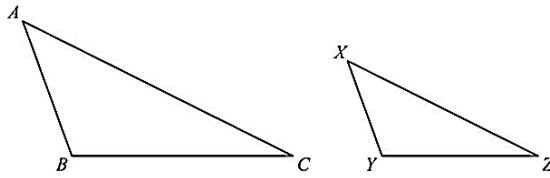


Step	Statement	Justification
1	\overline{CD} is the perpendicular bisector of \overline{AB} .	Given
2	$\overline{AD} \cong \overline{BD}$	Definition of bisector
3	$\overline{CD} \cong \overline{CD}$	Reflexive Property of Congruence
4	$\angle ADC$ and $\angle BDC$ are right angles.	Definition of perpendicular lines
5	$\angle ADC \cong \angle BDC$	All right angles are congruent.
6	$\triangle ADC \cong \triangle BDC$	_____ ?
7	$\overline{AC} \cong \overline{BC}$	CPCTC

Which of the following would justify step 6?

- A. ASS
- B. ASA
- C. SAS
- D. SSS

6) In the triangles shown, $\triangle ABC$ is dilated by a scale factor of $\frac{2}{3}$ to form $\triangle XYZ$.



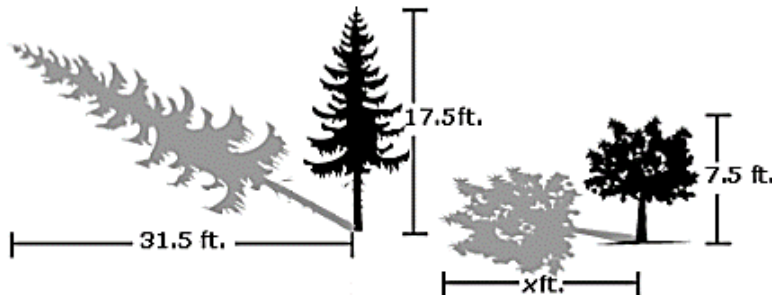
Given that $m\angle A = 50^\circ$ and $m\angle B = 100^\circ$, what is $m\angle Z$?

- A. 15
- B. 25
- C. 30
- D. 50

5) _____

6) _____

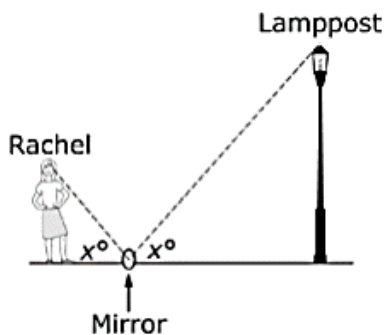
7. Given the diagram below, what is the value of x ?



- A. 13.5
- B. 14.6
- C. 15.5
- D. 16.6

7) _____

8. To find the height of a lamppost at a park, Rachel placed a mirror on the ground 20 feet from the base of the lamppost. She then stepped back 4 feet so that she could see the top of the lamppost in the center of the mirror. Rachel's eyes are 5 feet and 6 inches above the ground. What is the height, in feet, of the lamppost?



8) _____