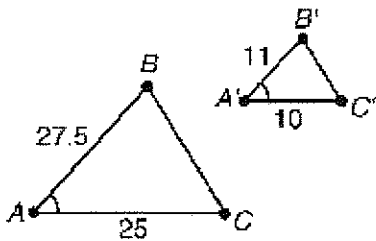


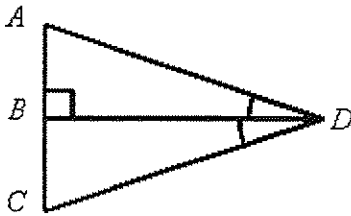
**UNIT Review - Triangles**

- \_\_\_\_\_ 1. For a triangle, list the respective names of the points of concurrency of
- perpendicular bisectors of the sides
  - bisectors of the angles
  - medians
  - lines containing the altitudes
- a. incenter                      b. circumcenter                      c. incenter                      d. circumcenter  
 circumcenter                      incenter                      circumcenter                      incenter  
 centroid                      centroid                      orthocenter                      orthocenter  
 orthocenter                      orthocenter                      centroid                      centroid

- \_\_\_\_\_ 2. Shown below is an illustration of the \_\_\_\_\_.



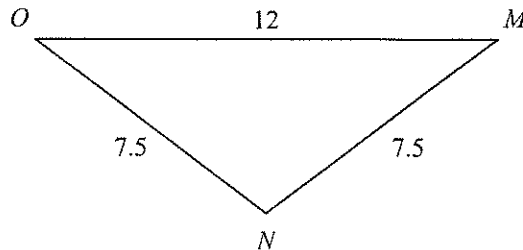
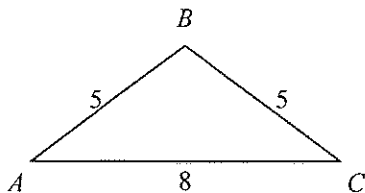
- a. SAS Similarity Theorem                      c. SSS Similarity Theorem  
 b. SAS Congruence Theorem                      d. AA Similarity Postulate
- \_\_\_\_\_ 3.  $\triangle ABD \cong \triangle CBD$ . Name the theorem or postulate that justifies the congruence.



- a. SAS                      b. AAS                      c. ASA                      d. HL

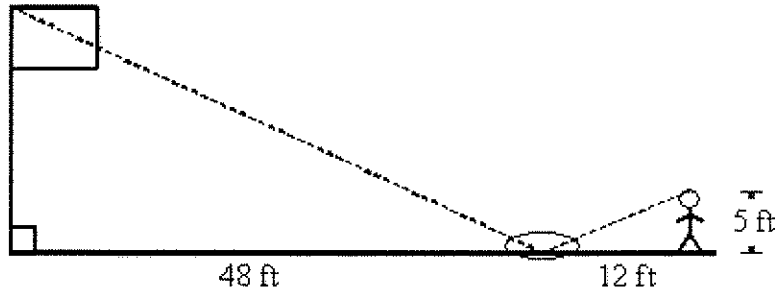
**State whether the triangles are similar. If so, write a similarity statement and the postulate or theorem you used.**

- \_\_\_\_\_ 4.

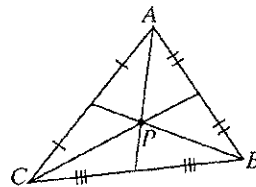
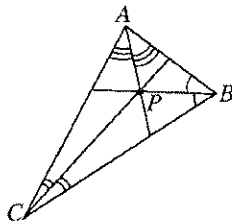


- a.  $\triangle ABC \sim \triangle MNO$ ; SSS~  
 b.  $\triangle ABC \sim \triangle MNO$ ; SAS~  
 c.  $\triangle ABC \sim \triangle MNO$ ; AA~  
 d. The triangles are not similar.

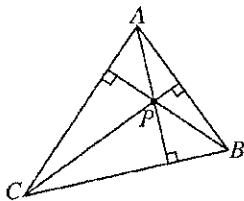
5. Michele wanted to measure the height of her school's flagpole. She placed a mirror on the ground 48 feet from the flagpole, then walked backwards until she was able to see the top of the pole in the mirror. Her eyes were 5 feet above the ground and she was 12 feet from the mirror. Using similar triangles, find the height of the flagpole to the nearest tenth of a foot.



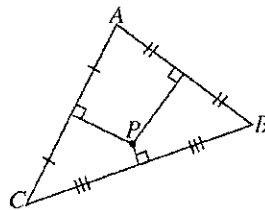
- a. 20 ft                      b. 38.4 ft                      c. 55 ft                      d. 25 ft
6. Which statement is logically equivalent to "If it is raining in Louisville Ky, then it is raining in the US"?
- a. If it is raining in the US, then it is raining in the Louisville KY.  
 b. If it is raining in the US, then it is not raining in the Louisville KY.  
 c. If it is not raining in the US, then it is not raining in the Louisville KY.  
 d. If it is not raining in Louisville Ky, then it is not raining in the US.
7. Which diagram shows a point  $P$  an equal distance from points  $A$ ,  $B$ , and  $C$ ?



b.



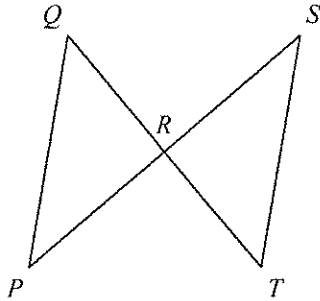
d.



8. Supply the missing reasons to complete the proof.

**Given:**  $\angle Q \cong \angle T$  and  $\overline{QR} \cong \overline{TR}$

**Prove:**  $\overline{PR} \cong \overline{SR}$



Statement	Reasons
1. $\angle Q \cong \angle T$ and $\overline{QR} \cong \overline{TR}$	1. Given
2. $\angle PRQ \cong \angle SRT$	2. Vertical angles are congruent.
3. $\triangle PRQ \cong \triangle SRT$	3. _____ ? _____
4. $\overline{PR} \cong \overline{SR}$	4. _____ ? _____

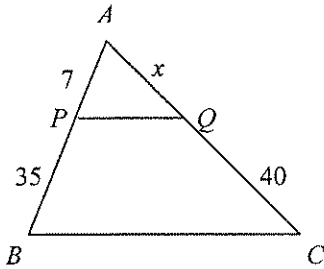
a. SAS; CPCTC.

c. AAS; CPCTC.

b. ASA; CPCTC.

d. ASA; Substitution

9. What is the value of  $x$ , given that  $\overline{PQ} \parallel \overline{BC}$ ?



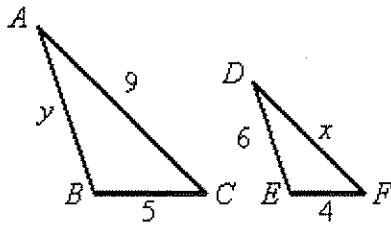
a. 8

b. 11

c. 10

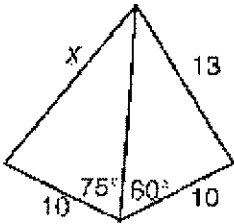
d. 16

10. Given that  $\triangle ABC \sim \triangle DEF$ , solve for  $x$  and  $y$ .



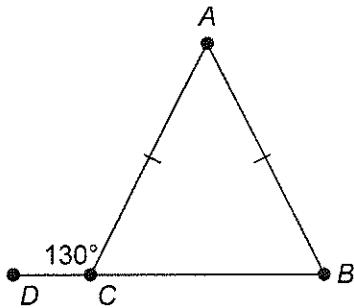
- a.  $x = 8.2, y = 7.5$
- b.  $x = 8.2, y = 8.5$
- c.  $x = 7.2, y = 7.5$
- d.  $x = 7.2, y = 8.5$

11. Refer to the figure. Choose the correct statement.



- a.  $x > 13$
- b.  $x = 13$
- c.  $10 < x < 13$
- d.  $x < 10$

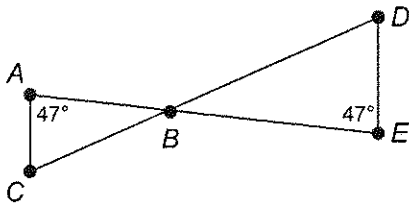
12. Triangle  $ABC$ , shown in the diagram below, is an isosceles triangle.



If the measure of  $\angle ACD$  is  $130^\circ$ , what is the measure of  $\angle ABC$ ?

- a.  $220^\circ$
- b.  $130^\circ$
- c.  $65^\circ$
- d.  $50^\circ$

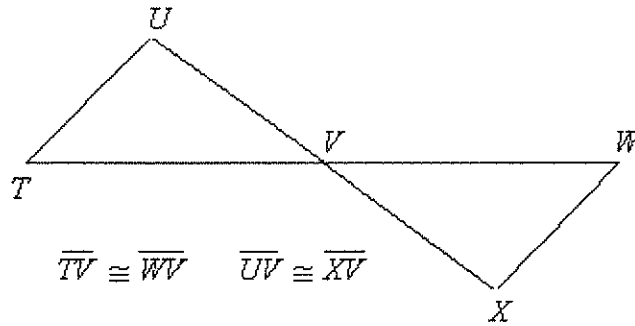
13. Below are two triangles.



By what method can similarity be proven? Name the similarity.

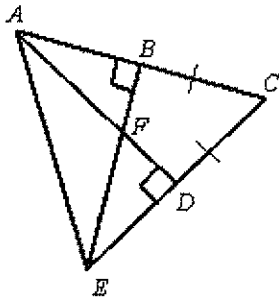
- a. SAS Similarity  $\triangle ABC \sim \triangle EBD$
- b. AA Similarity  $\triangle ABC \sim \triangle DBE$
- c. Unable to prove similarity
- d. AA Similarity  $\triangle ABC \sim \triangle EBD$

14. Refer to the figure shown. Which of the following statements is true?



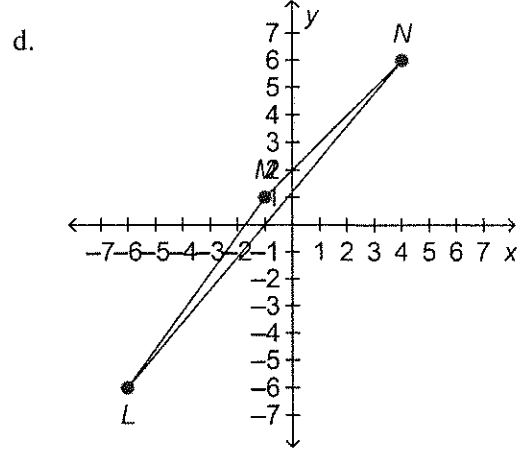
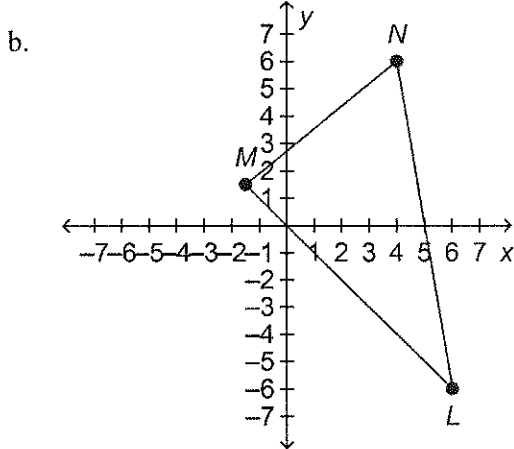
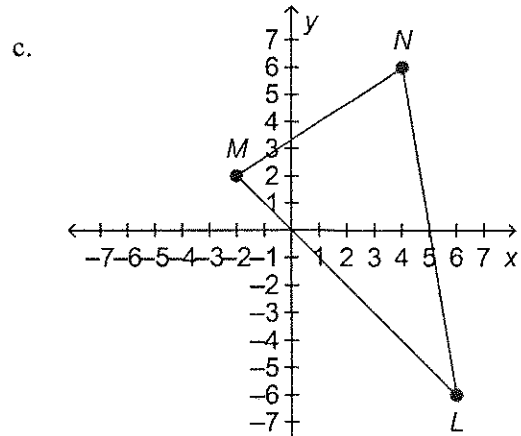
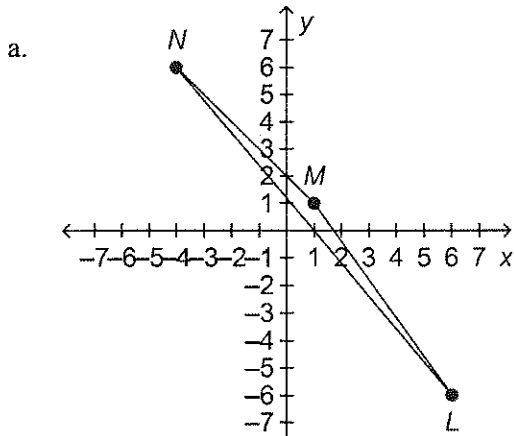
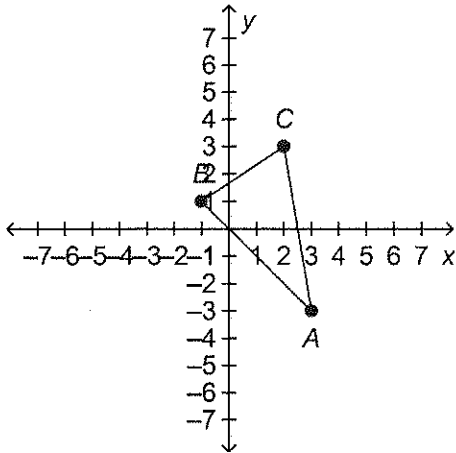
- a.  $\triangle TUV \cong \triangle XWV$  by ASA
- b.  $\triangle TUV \cong \triangle WXV$  by SAS
- c.  $\triangle TUV \cong \triangle WXV$  by SSS
- d.  $\triangle TUV \cong \triangle VWX$  by SAS

15. Which overlapping triangles are congruent by ASA?

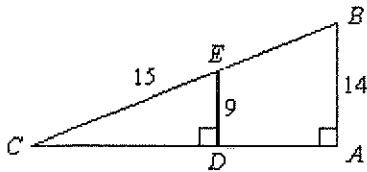


- a.  $\triangle ADC \cong \triangle EBC$
- b.  $\triangle ABE \cong \triangle CDA$
- c.  $\triangle ABE \cong \triangle DEA$
- d.  $\triangle ADC \cong \triangle EDA$

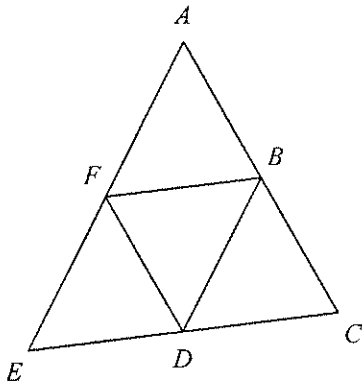
16. Which of the following figures is similar to triangle  $ABC$ ?



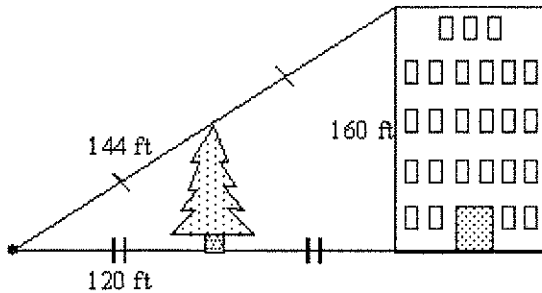
- \_\_\_ 17. Given that  $\frac{ED}{BA} = \frac{EC}{BC}$ , find  $BC$  to the nearest tenth. The figure is not drawn to scale.



- a. 6.7                      b. 25.5                      c. 8.3                      d. 23.3
- \_\_\_ 18. Points  $B, D,$  and  $F$  are midpoints of the sides of  $\triangle ACE$ .  $EC = 30$  and  $DF = 17$ . Find  $AC$ . The diagram is not to scale.

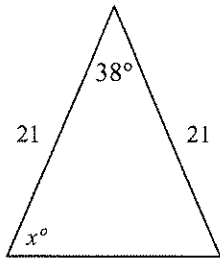


- a. 34                      b. 8.5                      c. 30                      d. 60
- \_\_\_ 19. Use the information in the diagram to determine the height of the tree to the nearest foot.



- a. 80 ft                      b. 264 ft                      c. 60 ft                      d. 72 ft

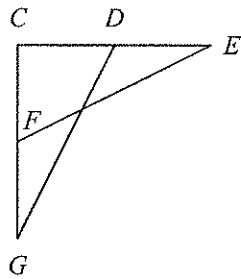
\_\_\_\_ 20. What is the value of  $x$ ?



Drawing not to scale

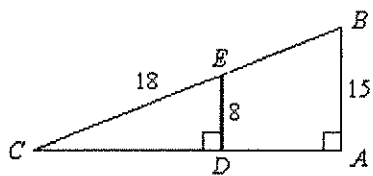
- a.  $71^\circ$                       b.  $142^\circ$                       c.  $152^\circ$                       d.  $76^\circ$

\_\_\_\_ 21. What common angle do  $\triangle CDG$  and  $\triangle FCE$  share?



- a.  $\angle D$     c.  $\angle C$   
 b.  $\angle F$     d.  $\angle E$

\_\_\_\_ 22. Given that  $\frac{ED}{BA} = \frac{EC}{BC}$ , find  $BC$  to the nearest tenth. The figure is not drawn to scale.



- a. 2.3    b. 31.6    c. 15.8    d. 33.8