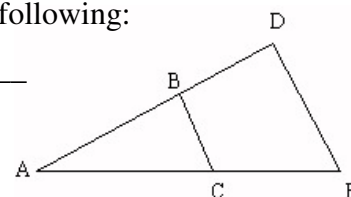


Simplify all answers and show your work!

- 1) The Hypotenuse-Leg Congruence Theorem may only be used with _____ triangles.
- 2) Corresponding angles in a similar triangle are _____.
- 3) Corresponding sides in a similar triangle are _____.
- 4) The Pythagorean Theorem may only be used with _____ triangles.
- 5) Samantha, who is 5.25 feet tall, casts a 16-foot shadow the same time that a light pole casts a shadow that is 116.8 feet long. How tall is the light pole?

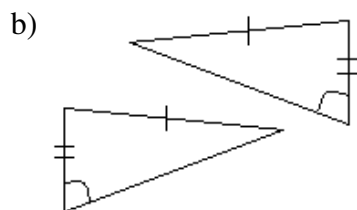
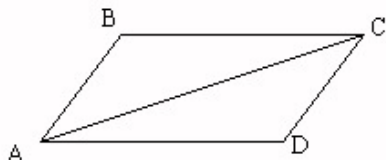
6) If $\triangle ADE \sim \triangle ABC$ where $AB = 2.4$, $AD = 4.2$, $AC = 3.2$, and $DE = 2.8$, find the following:

- a) $BD =$ _____ b) $AE =$ _____ c) $CE =$ _____ d) $BC =$ _____

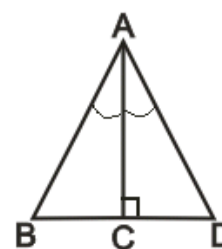


7) Determine which theorem – if any – proves congruence for the given triangles: SSS, SAS, ASA, AAS, HL, or none.

- a) $\triangle ABC$ and $\triangle CDA$
(Given ABCD is a parallelogram.)

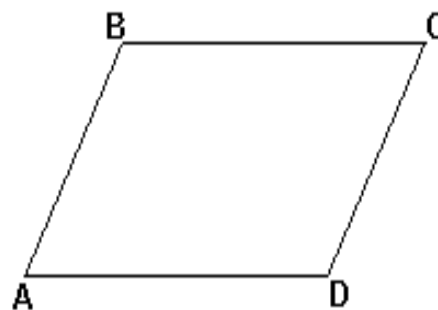


- c) $\triangle ACB$ and $\triangle ACD$

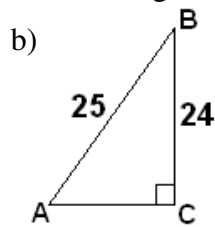
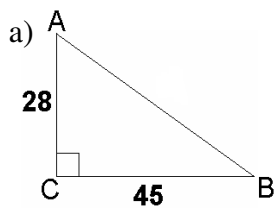


8) Given the parallelogram ABCD to the right, where $AB = 8$ ft, $AD = 10$ m, and $m\angle B = 104^\circ$, find the following:

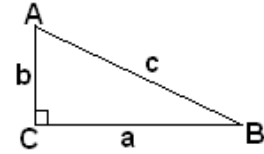
- a) $BC =$ _____ b) $CD =$ _____
- c) $m\angle D =$ _____ d) $m\angle A =$ _____
- e) $m\angle C =$ _____



9) Find the length of the missing side in each of the right triangles below.

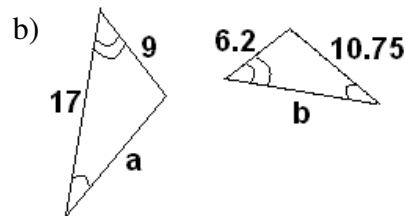
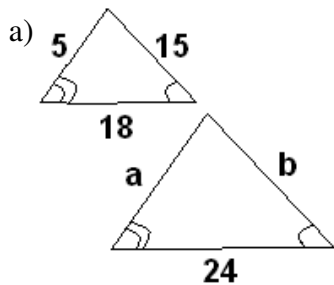


c) Where $a = 12$ and $b = 15$.



10) A Little League baseball diamond is a square with dimensions 60 feet by 60 feet and with the bases located on the corners of the diamond. What is the distance a player on first base has to throw to a player on third base?

11) Find the unknown lengths in each pair of triangles.



12) On a blueprint, 1 inch represents 0.5 feet in actuality. A rectangular room on the blueprint measures 27 inches by 30.5 inches. What are the dimensions of the room in actuality?

13) A guy wire 30 feet long supports an antenna from the ground to a point 24 feet above the ground. How far from the base of the antenna is the guy wire secured to the ground?