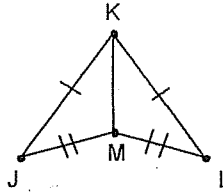
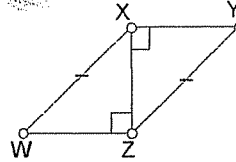


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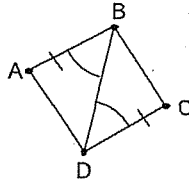
1. Identify the congruent triangles in the figure:



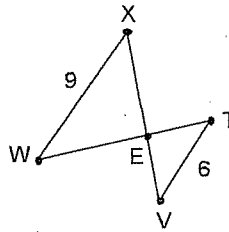
2. Using the figure on the right, $\triangle WXZ$ can be proven congruent to $\triangle YZX$ by:



3. Using the figure on the right: $\triangle ABD \cong \triangle CDB$ by _____

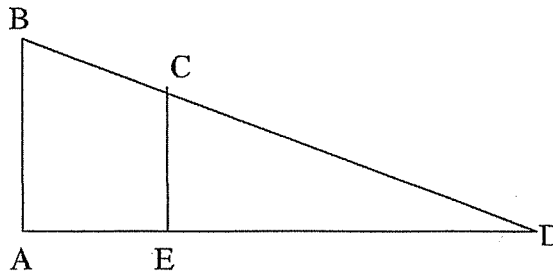


4. Determine whether $\triangle WEX \sim \triangle TEV$:

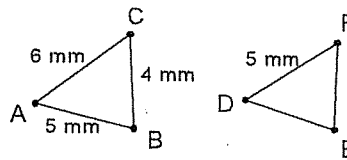


5. If $\overline{CE} \parallel \overline{BA}$ and $\triangle ABD \sim \triangle ECD$, which proportion is true?

- A. $\frac{CE}{BA} = \frac{AD}{ED}$
 B. $\frac{AD}{ED} = \frac{AB}{EC}$
 C. $\frac{ED}{CD} = \frac{AE}{AD}$
 D. $\frac{EC}{ED} = \frac{DE}{BD}$



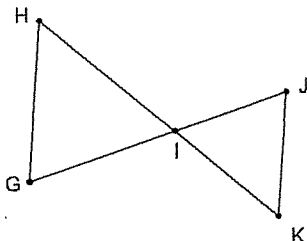
6. Given: $\triangle ABC \sim \triangle DEF$, find the perimeter of $\triangle DEF$:



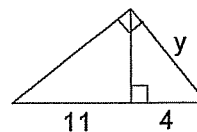
7. Sidney measured his shadow and the shadow of a pecan tree at the same time. Sidney is 6 feet tall and his shadow is 8.5 feet long. The length of the tree shadow is 27 feet. What is the height of the pecan tree? Round to the nearest tenth.

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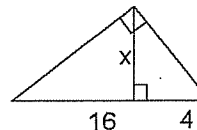
8. Given $\triangle CAT$ is isosceles with base \overline{CA} and a perimeter of 44 mm. If $TA = (2y - 3)$ mm and $AC = (y + 5)$ mm, find y .
9. Given: $\triangle GHI \sim \triangle JKI$ with $m\angle H = 65^\circ$ and $m\angle HIG = 59^\circ$, find the $m\angle J$.



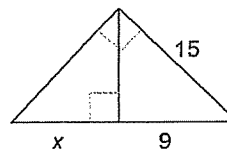
10. Use: A leg of the right \triangle is the geometric mean between the hypotenuse and the segment of the hypotenuse adjacent to that leg. Solve for y .



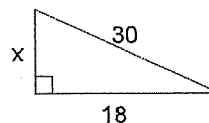
11. Use: Altitude to the hypotenuse of a right \triangle is the geometric mean between the two segments of the hypotenuse. Solve for x .



12. Use: A leg of the right \triangle is the geometric mean between the hypotenuse and the segment of the hypotenuse adjacent to that leg. Solve for x .



13. If a triangle has angles with measures of 62° , 17° , and 101° , classify the triangle based on its angles.
14. If a triangle has sides with measures of 17 m, 28 m, and 17 m, classify the triangle based on its sides.
15. List sides of $\triangle ABC$ in order from longest to shortest if the angles of $\triangle ABC$ have the following measures: $m\angle A = 28^\circ$, $m\angle B = 84^\circ$ and $m\angle C = 68^\circ$.
16. Find the value of y in the equilateral $\triangle ABC$ if $AB = y + 6$, $BC = 2y - 9$, and $CA = 3y - 24$.
17. Determine the missing hypotenuse in a right triangle with legs of 8 ft. and 15 ft.
18. What is the value of x in the right triangle shown?



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19. On a softball field the distance between each base, as you run the bases, is 60 ft. What is the distance to throw the ball from home plate to second base?
20. Given $\triangle FGH$ with $m\angle F = 45^\circ$ and $m\angle G = 90^\circ$, if $FH = 12$, find FG and HG .
21. Given $\triangle MNP$ with $MN = NP$ and $m\angle N = 90^\circ$, if $NP = 18$, find MP and MN .
22. Given $\triangle TUV$ with $m\angle T = 30^\circ$ and $m\angle V = 60^\circ$, if $TV = 20$, find TU and UV .
23. Find the length of \overline{DG} and \overline{DO} .

