

8.1-8.6 Intervention Acc Geometry

Quiz review for questions: #1-20, 22, 25-30, 32-35

Find the geometric mean between the two numbers.

1. $\frac{2\sqrt{2}}{5}$ and $\frac{3\sqrt{2}}{5}$

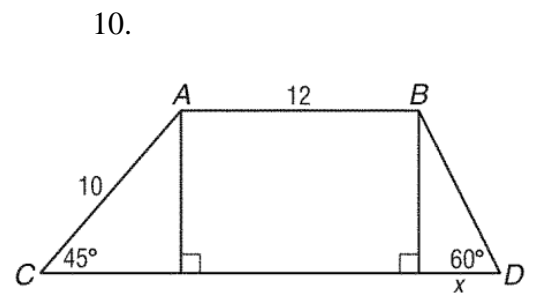
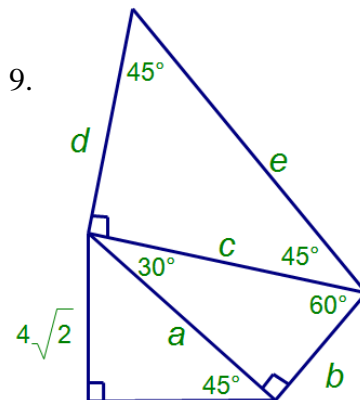
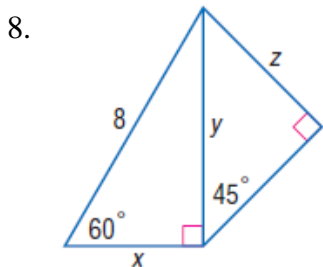
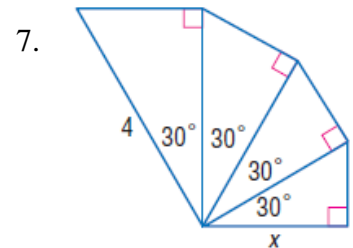
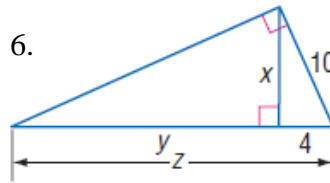
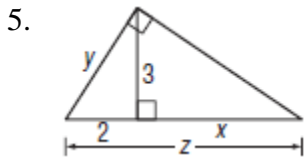
2. 3 and 24

The geometric mean and one extreme are given. Find the other extreme.

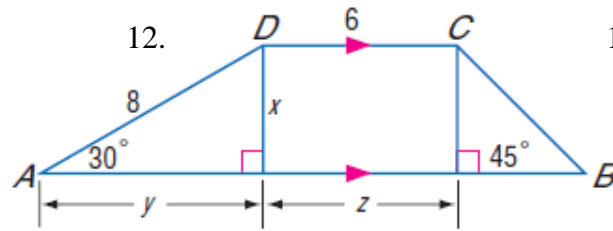
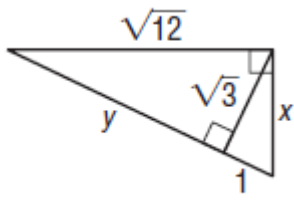
3. $\sqrt{24}$ is the geometric mean between a and b . Find b if $a = 2$.

4. $\sqrt{12}$ is the geometric mean between a and b . Find b if $a = 3$.

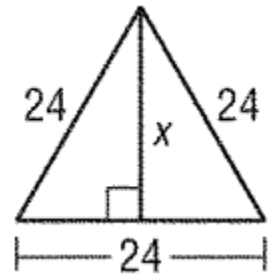
Use **EXACT** values for #5-18 and **round to the nearest tenth** for #19-24 to find EACH variable.



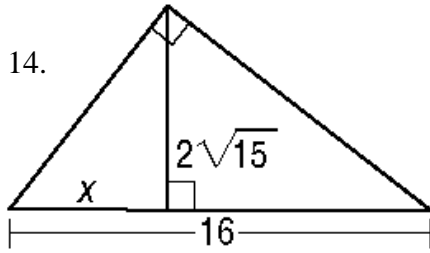
11.



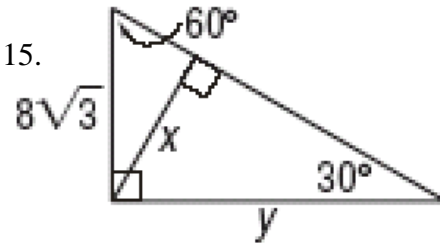
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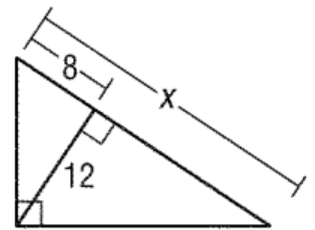
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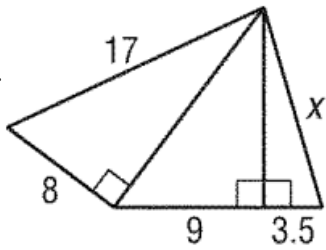
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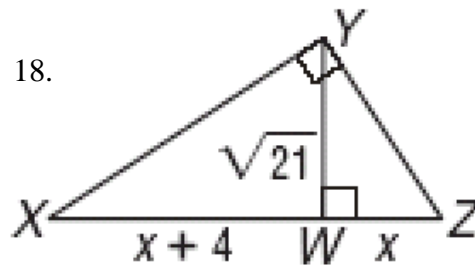
16.



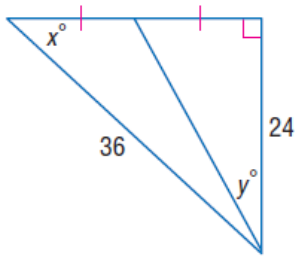
17.



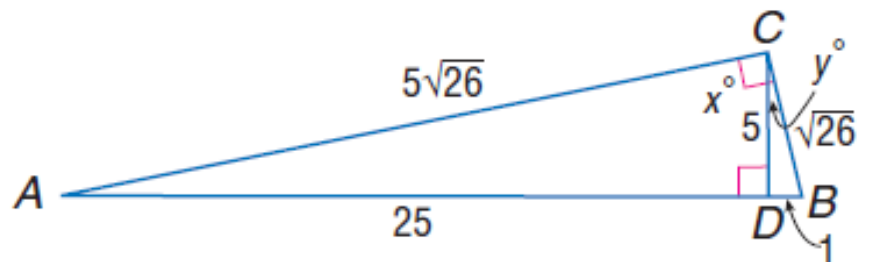
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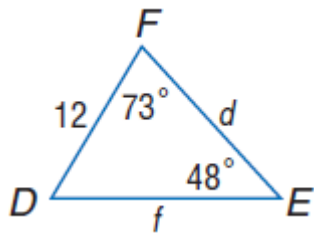
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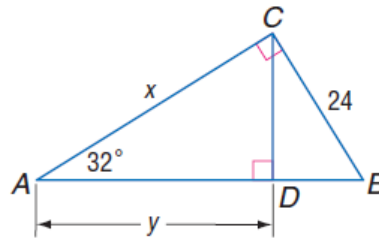
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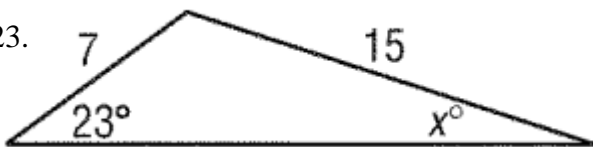
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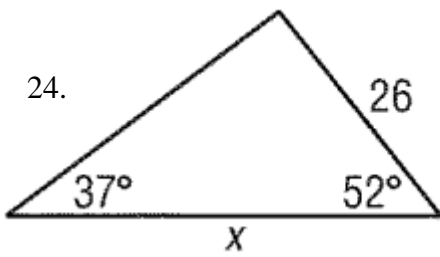
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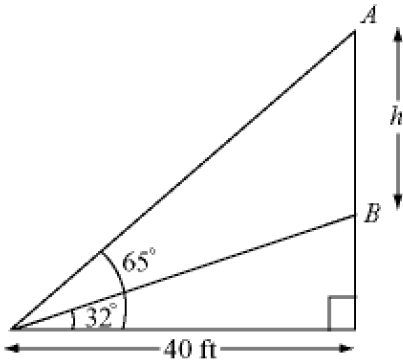
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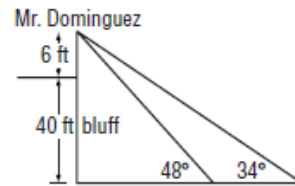
24.



25. In the figure below, A and B represent the top and the bottom of a large balloon floating directly above the street. Arnold is standing 40 feet from a point on the street directly beneath the balloon. Find the height h of the balloon.

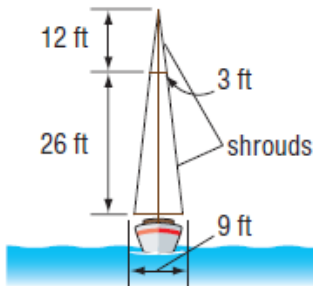


26. **INDIRECT MEASUREMENT** Mr. Dominguez is standing on a 40-foot ocean bluff near his home. He can see his two dogs on the beach below. If his line of sight is 6 feet above the ground and the angles of depression to his dogs are 34° and 48° , how far apart are the dogs to the nearest foot?

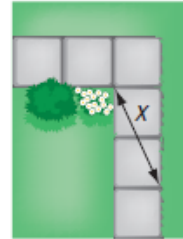


27. **CIVIL ENGINEERING** An airport, a factory, and a shopping center are at the vertices of a right triangle formed by three highways. The airport and factory are 6.0 miles apart. Their distances from the shopping center are 3.6 miles and 4.8 miles, respectively. A service road will be constructed from the shopping center to the highway that connects the airport and factory. What is the shortest possible length for the service road? Round to the nearest hundredth.

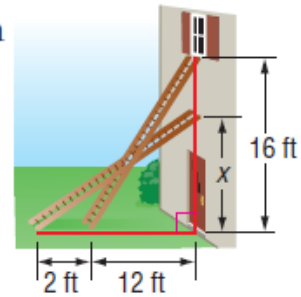
28. **SAILING** The mast of a sailboat is supported by wires called *shrouds*. What is the total length of wire needed to form these shrouds?



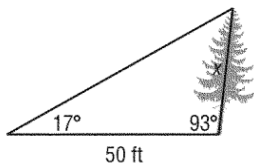
29. **LANDSCAPING** Six congruent square stones are arranged in an L-shaped walkway through a garden. If $x = 15$ inches, then find the area of the L-shaped walkway.



30. **PAINTING** A painter sets a ladder up to reach the bottom of a second-story window 16 feet above the ground. The base of the ladder is 12 feet from the house. While the painter mixes the paint, a neighbor's dog bumps the ladder, which moves the base 2 feet farther away from the house. How far up the side of the house does the ladder reach?

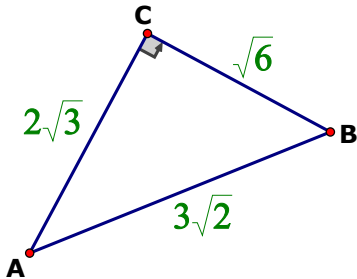


31. A tree grew at a 3° slant from the vertical. At a point 50 feet from the tree, the angle of elevation to the top of the tree is 17° . Find the length of the tree to the nearest tenth of a foot.



32. Do lengths 3, 4, 6 make a right triangle? Why, or why not?

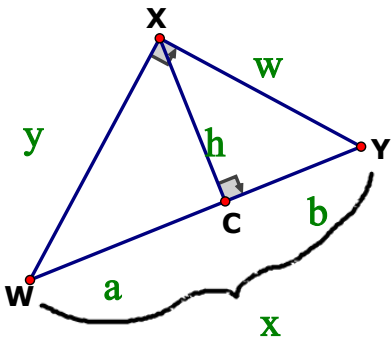
33. Find the ratios of sine, cosine and tangent of $\angle A$ and $\angle B$.



34. Write a proof:

Given: $\triangle WXY$ with right $\angle X$

Prove: $w^2 + y^2 = x^2$



35. In the figure, $\sin\theta = \frac{16}{20}$. Find $\cos\theta$ and $\tan\theta$. (This is a multi-step question. These types of questions you will need to make inferences and use different math concepts to answer the question. Just like all of your questions on ACT and classroom assessments.)

