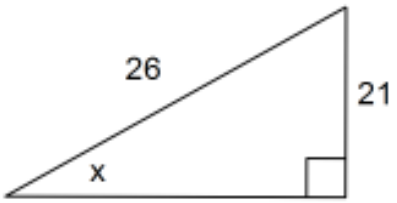
Geometry Chapter 8 Practice Test Spring 2020

Round to the nearest hundredth unless noted otherwise.

For 1-6 find the value of x to the nearest hundredth. Show the equation you used.

1.



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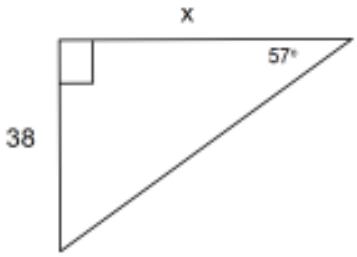

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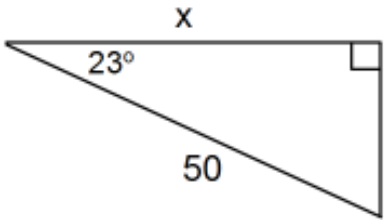

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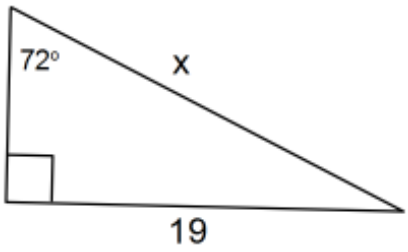

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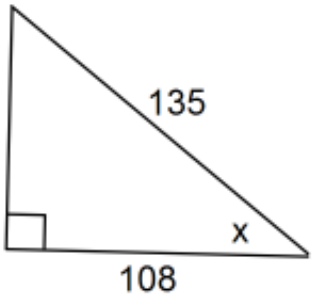

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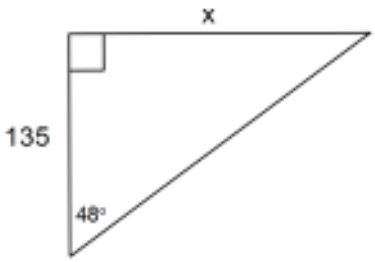


7. A support cable is connected to the top of a flag pole and to a stake in the ground that is located 25 feet from the flagpole. The wire makes a 62° angle with the ground. How long is the support cable? Round to the nearest hundredth. Draw and label a diagram.

8. Does this set of numbers form a Right Triangle? 19, 180, 181 Give a reason for your answer.

9. You are 400 feet from a tall cliff. You see a rock climber on the cliff with an angle of elevation of 33°. How high up on the cliff is the rock climber? Round to the nearest hundredth. Draw and label a diagram.

10. Is each triangle Right, Acute, or Obtuse? Show the work that leads to your answer.

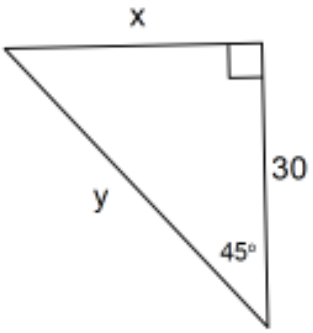
a) 19, 25, 30

b) 46, 51, 69

11. You are on top of a 120 foot tall building and see a car accident at a near intersection with an angle of depression of 40°. How far from the building that you are on top of is the accident scene?. Round to the nearest hundredth. Draw and label a diagram.

For 12 - 15 find the EXACT value of each variable. Given non-integer answers in simplified radical form. Rationalize all denominators. Do not use decimals in your answers, just simplify the fraction.

12.



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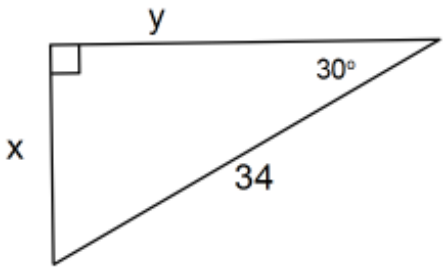

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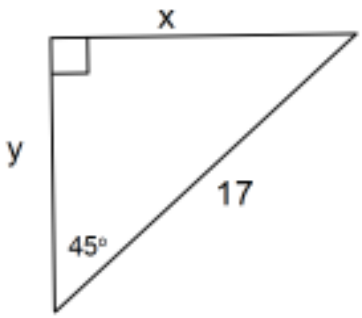

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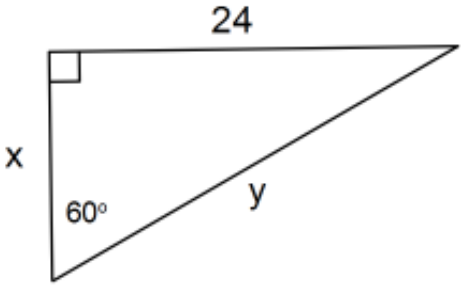
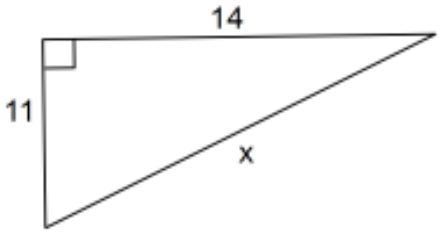
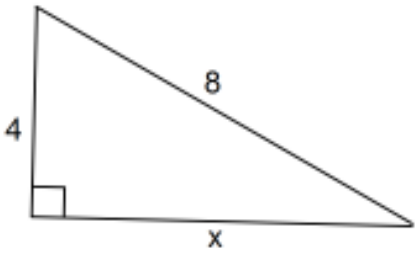


16. Find x to the nearest hundredth

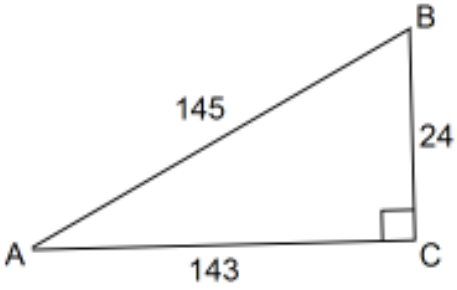


17. Find x in simplified radical form.



18. Two sides of a right triangle are 33 and 56. The third side is a whole number. Find the third side.

19. Use $\triangle ABC$ to find each as a ratio. a) Cos A = b) Sin B = c) Tan B =



Geometry Chapter 8 Practice Test ANSWERS

1. $x = 53.87°$ 2. $x = 24.68$ 3. $x = 46.03$

4. $x = 19.98$ 5. $x = 36.87°$ 6. $x = 149.93$

7. cable $= 53.25$ ft.

8. Yes, it's a right triangle because these three numbers make the Pythagorean Theorem true.

9. $h = 259.76$ ft

10. a) Acute $\triangle$ because $c^2 < a^2 + b^2$ b) Obtuse $\triangle$ because $c^2 > a^2 + b^2$

11. distance away from building $= 143.01$ ft

12. $x = 30$ $y = 30\sqrt{2}$ 13. $x = 17$ $y = 17\sqrt{3}$

14. x & y are both legs of a 45-45-90 $\triangle$ so they are congruent. $x = y = \frac{17\sqrt{2}}{2}$

15. $x = 8\sqrt{3}$ $y = 16\sqrt{3}$ 16. $x = 17.80$ 17. $x = 4\sqrt{3}$

18. $x = 65$ 19. $\cos A = \frac{143}{145}$ $\sin B = \frac{143}{145}$ $\tan B = \frac{143}{24}$