You will attach Ch. 7 Calendar to this page!

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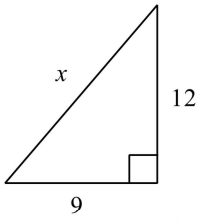
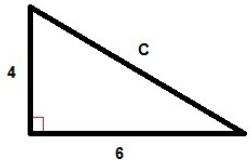
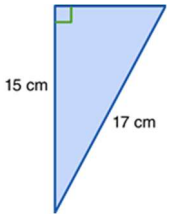
7.1 Worksheet

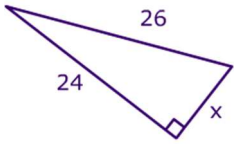
Name_____

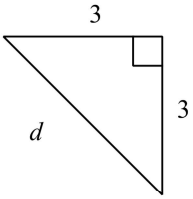
For #1 – 11, find the missing side in each triangle by using the Pythagorean Theorem. If needed, write your answer as a simplified radical.

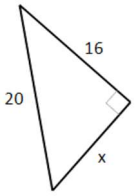
1) 

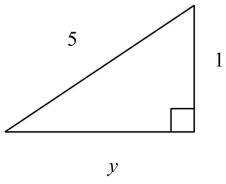
2) 

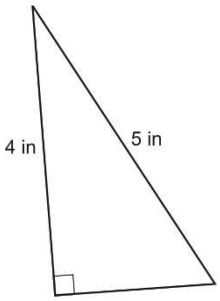
3) 

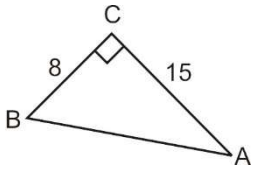
4) 

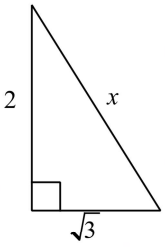
5) 

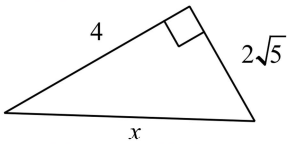
6) 

7) 

8) 

9) 

10) 

11) 

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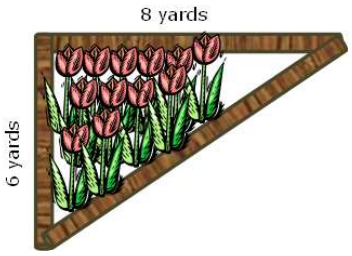
12) A triangle has side lengths of 5, 12, and 13. Is it a right triangle? Explain how you know, and make sure to justify your conclusion with mathematical work**.**

For #13 – 15, use the diagram shown of a triangular garden.

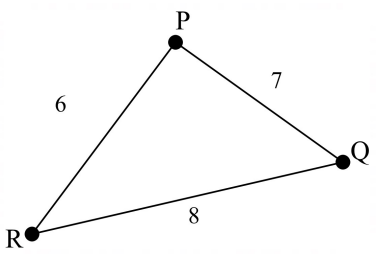


13) Find the length of the missing side of the garden. Assume the triangle is a right triangle and that the missing side is the hypotenuse.

14) Find the perimeter of the garden.

15) Find the area of the garden. Reminder: $A = \frac{1}{2}bh$

Review: For #16 – 17, given ΔPQR as shown. Assume a dilation occurs with a scale factor of 4.



16) How long is $P'Q'$?

17) How long is $Q'R'$?

For #18 – 19, factor each expression.

18) $a^2 - 3a - 10$

19) $x^2 + 12x + 35$

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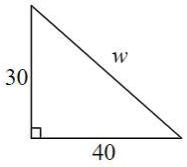
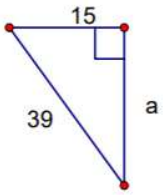
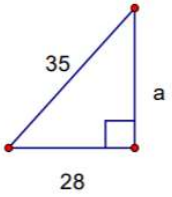
7.2 Worksheet

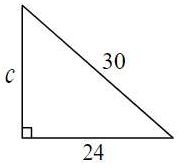
Name_____

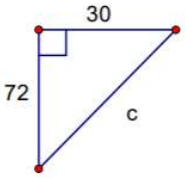
For #1 – 12, find the missing side for each right triangle by using triples or the Pythagorean Theorem.

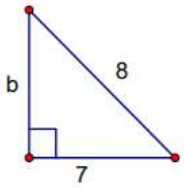
1) 

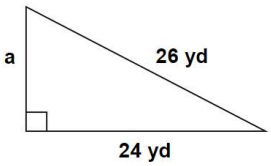
2) 

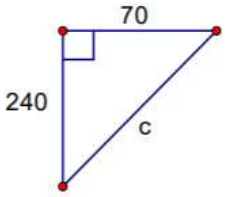
3) 

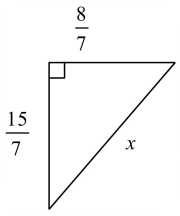
4) 

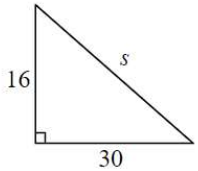
5) 

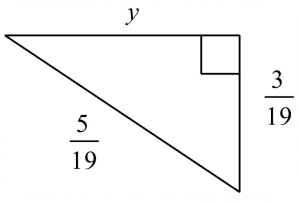
6) 

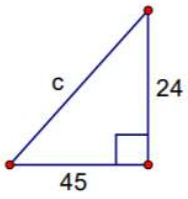
7) 

8) 

9) 

10) 

11) 

12) 

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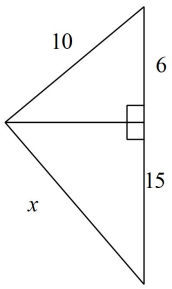
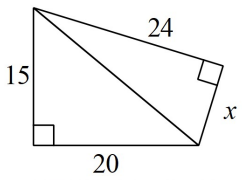
13) Find x.



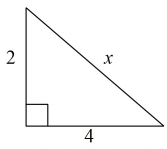
14) Find x.



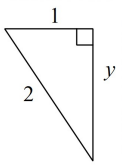
15) Pattra walked five blocks south, turned 90 degrees to the west, and then she walked 12 more blocks. How far is she from her original location?

For #16 – 20: Use the Pythagorean Theorem to find the variable. If needed, write your answer as a simplified radical.

16)



17)



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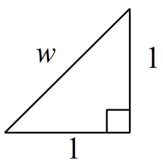

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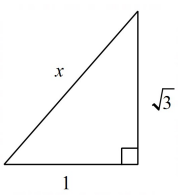

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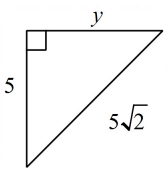

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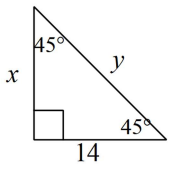
7.3 Worksheet

Name_____

For #1 – 4, find the variables in each 45-45-90 triangle.

1)



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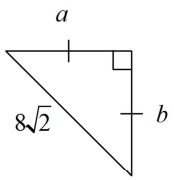
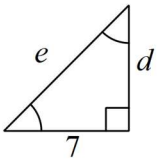
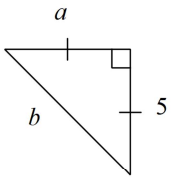


3)

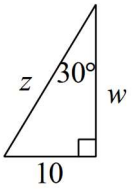


4)



For #5 – 8, find the variables in each 30-60-90 triangle.

5)



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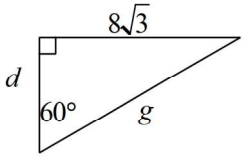

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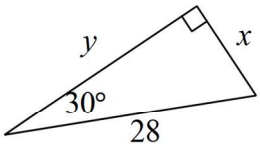
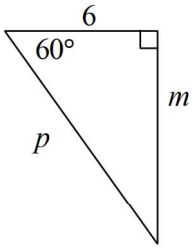
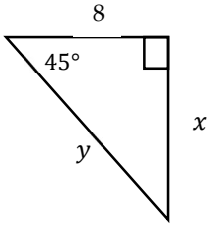


8)



For #9 – 11, find the variables in each special right triangle.

9)



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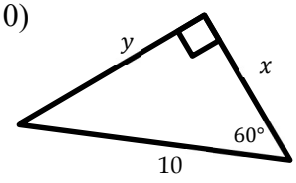
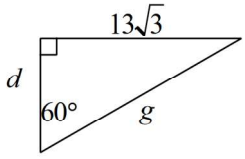


11)



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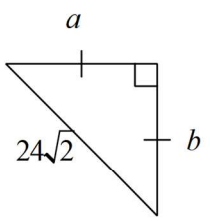
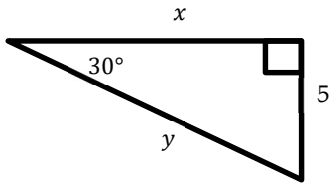
For #12 – 16, find the variables in each special right triangle.

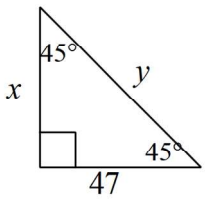
12)



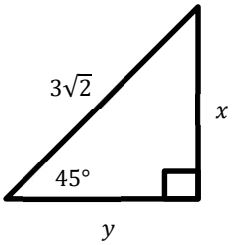
13)



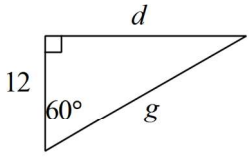
14)



15)



16)



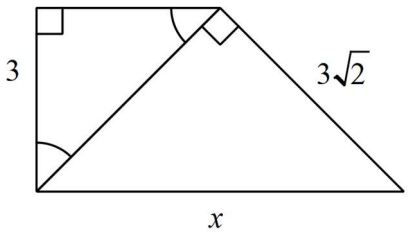
For #17 – 19, solve by factoring.

17) $x^2 + 2x - 15 = 0$

18) $2x^2 - 10x = 0$

19) $a^2 - 36 = 0$

20) Find x.



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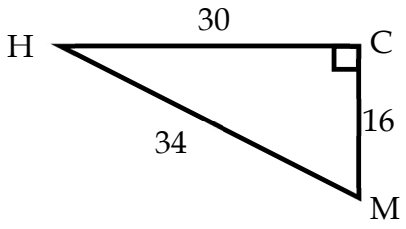
7.4 Worksheet

Name_____

For #1 – 8, write each ratio as a fraction (reduced). Use the diagram shown.

1) $\sin M$ 2) $\cos H$ 3) $\tan M$

4) $\tan H$ 5) $\sin H$ 6) $\cos M$



7) Compare your answers for #1 and #2 above. What do you notice?

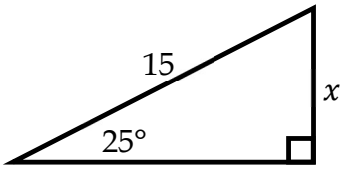
8) Compare your answers for #5 and #6 above. What do you notice?

For #9 – 11, use your calculator to find each value. Round to 2 decimal places.

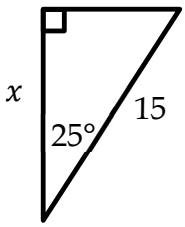
9) $\sin 17$ 10) $\cos 37$ 11) $\tan 75$

For #12 – 17, solve for the variable. Round to 2 decimal places.

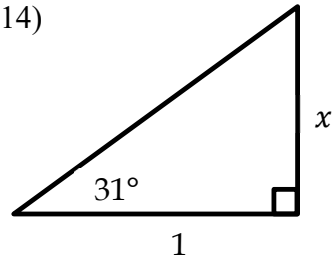
12)



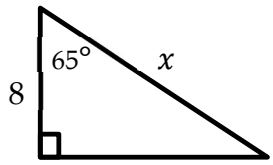
13)



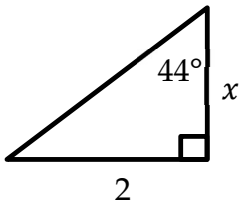
14)



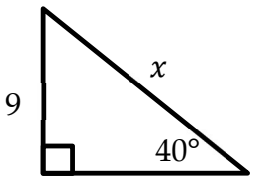
15)



16)



17)



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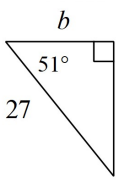
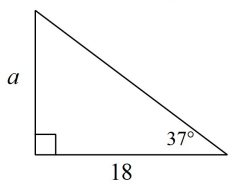
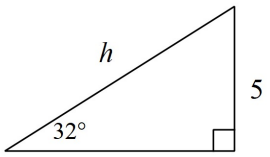
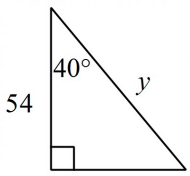
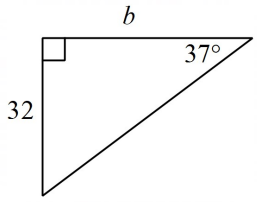
For #18 – 23, solve for the variable. Round to 2 decimal places.

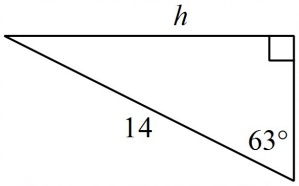
18) 

19) 

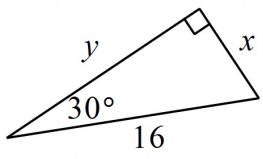
20) 

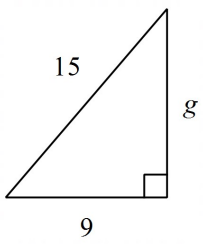
21) 

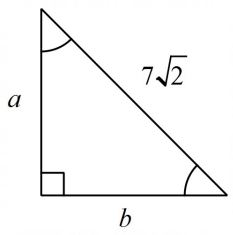
22) 

23) 

For #24 – 26: Use special right triangles or triples to find each variable.

24) 

25) 

26) 

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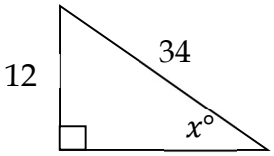
7.5 Worksheet

Name_____

For # 1 – 8, solve for x. Round your answers to the nearest tenth.

1)



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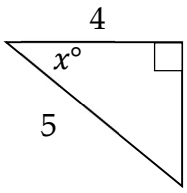
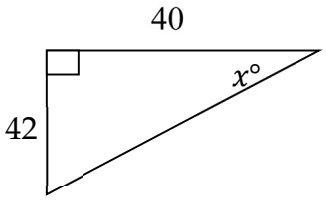


3)



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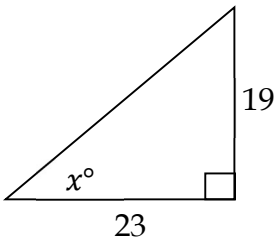

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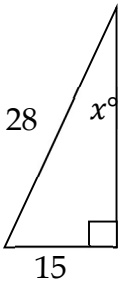

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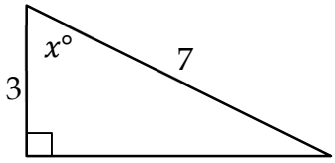

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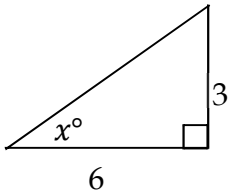
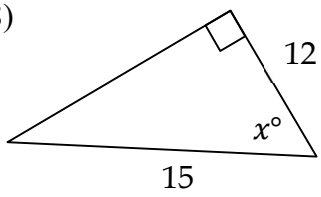
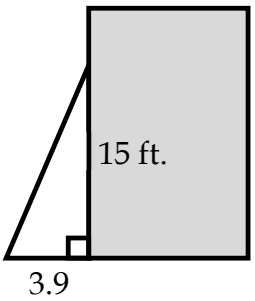


8)



9) A ladder leans against a wall and reaches a point 15 feet up the wall. The base of the ladder is 3.9 feet from the wall. What angle does the ladder make with the wall and with the ground? In other words, what is the angle of elevation? Round to one decimal place.



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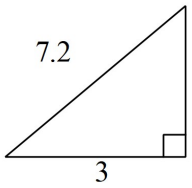
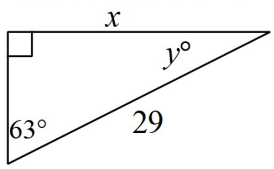
10) A 7.2 meter support wire goes from the top of a utility pole to a point on the ground that is 3 meters from the base of the pole. To the nearest degree, what angle does the guy wire make with the pole and with the Ground?

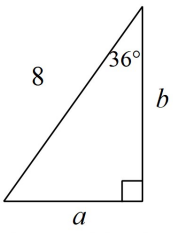


For #11 – 14, find the variable(s). Round to two decimal places.

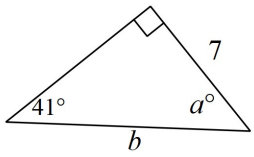
11)



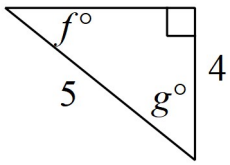
12)



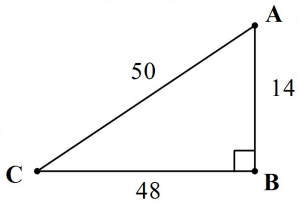
13)



14)



For #15 – 16, find the requested ratios (fractions) by using the diagram. Reduce if needed.

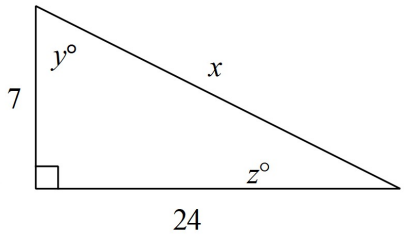


15) $\sin A$ 16) $\cos C$

17) Using the diagram from #15, find $m\angle A + m\angle C$.

18) True or False? If $\angle A$ is complementary to $\angle C$, then $\sin A = \cos C$.

BONUS! Find *x, y,* and *z*. Round to two decimal places, if needed.



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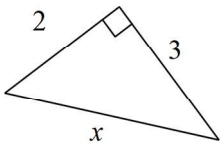
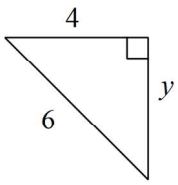
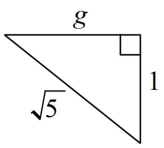
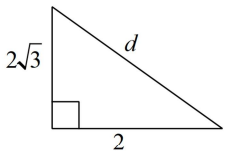
Ch 7 Review Worksheet (HOMEWORK) Name_____

For #1 – 4, solve for the missing side by using the Pythagorean Theorem. If needed, write your answer as a simplified radical.

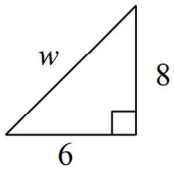
1) 

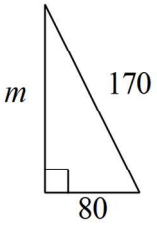
2) 

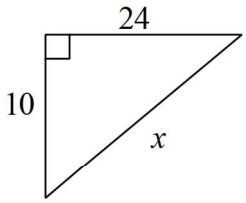
3) 

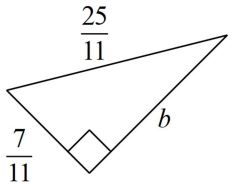
4) 

For #5 – 8, solve for the missing side by using triples.

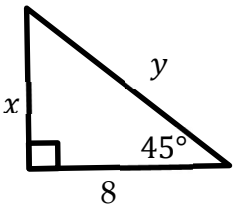
5) 

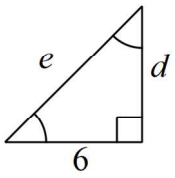
6) 

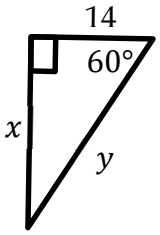
7) 

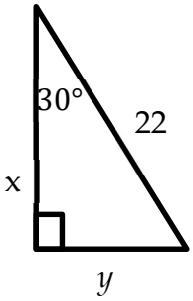
8) 

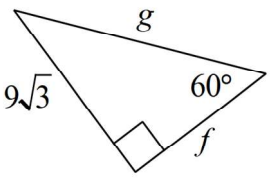
For #9 – 16, solve for the missing sides in each special triangle.

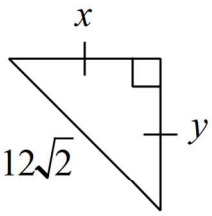
9) 

10) 

11) 

12) 

13) 

14) 

15) A boat departs Los Angeles, California, traveling to Catalina (an island off the California coast). Catalina is located 9 miles west and 12 miles south of the boat's departure point. About how many miles is Catalina from the departure point? Sketch a picture.

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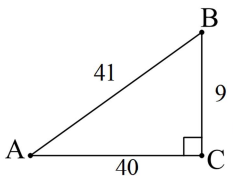
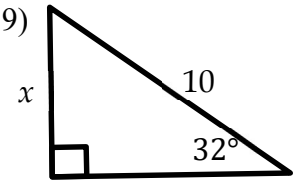
For #16 – 18, find each requested fraction. Use the diagram shown.

16) $\sin A$ 17) $\cos A$ 18) $\tan B$

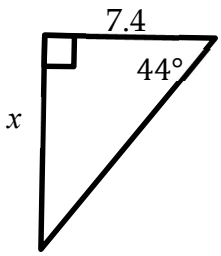


For #19 – 24, solve for each variable by using trigonometry. Round to one decimal place.

19)



20)



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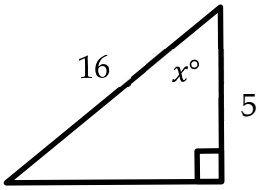

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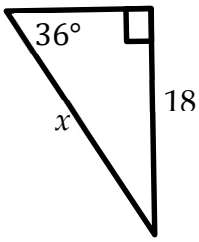

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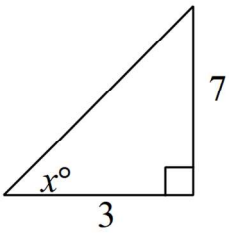

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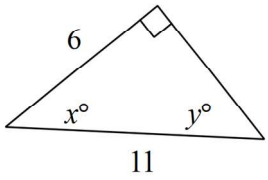
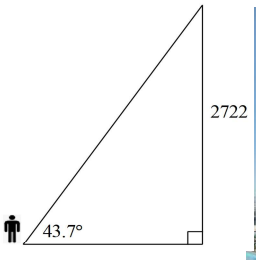
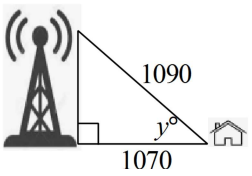


25) Dante is standing at ground level with the base of the tallest building in the world (the Burj Khalifa) in the United Arab Emirates. The angle formed by the ground and a line segment from his position to the top of the building is 43.7°. The height of the Burj Khalifa Building is 2722 feet! Find the distance that he is standing from the base of the Burj Khalifa Building to the nearest foot.



26) Aly's house is 1070 meters away from the base of the nearest cellphone tower. Her house is also 1090 miles away from the top of the same tower. Find the angle of elevation from her house to the top of the tower. Round to two decimal places.



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