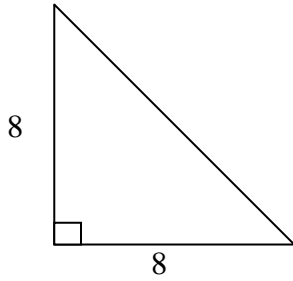


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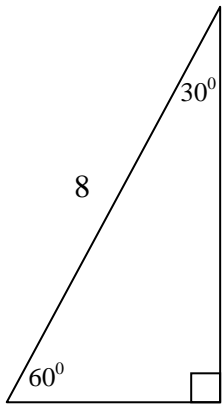
Name: \_\_\_\_\_ Period: \_\_\_\_\_

Find the missing sides of each triangle.

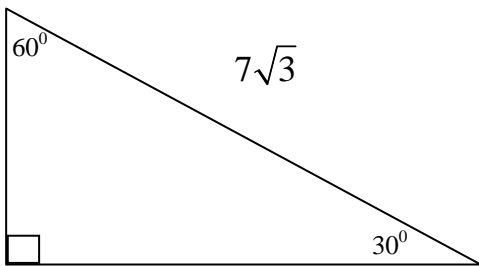
1.



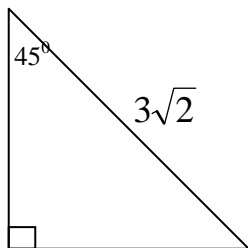
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3.



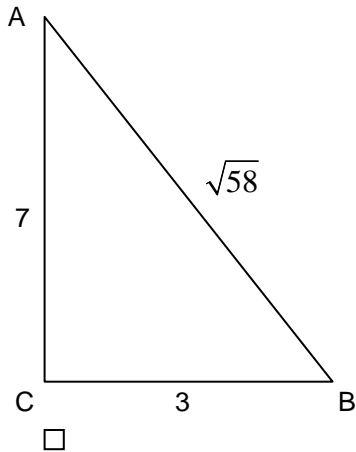
4.



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**Make sure your calculator is set in Degrees!!**

FIND THE FOLLOWING RATIOS (reduced fractions) AND THEN FIND THE MEASURE OF THE ANGLES.



4. Find  $\tan A$

8. Find  $\tan B$

5. Find  $\cos A$

9. Find  $\cos B$

6. Find  $\sin A$

10. Find  $\sin B$

7. Find  $m\angle A$

11. Find  $m\angle B$

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FIND THE VALUE OF EACH EXPRESSION. ROUND YOUR ANSWER TO FOUR DECIMAL PLACES.

12.  $\tan 39^\circ$

13.  $\sin 9.6^\circ$

14.  $\cos 79.4^\circ$

FIND THE MEASURE OF AN ACUTE ANGLE THAT SATISFIES THE GIVEN EQUATION. ROUND YOUR ANSWER TO THE FOUR DECIMAL PLACES.

15.  $\tan B = 0.4822$

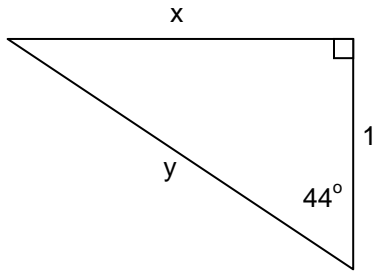
16.  $\sin C = \frac{10}{17}$

17.  $\cos A = 0.0286$

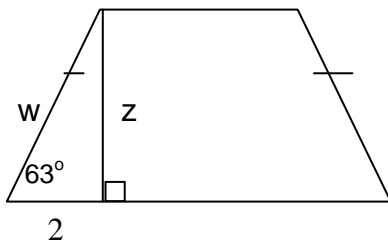
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FIND THE VALUE OF EACH VARIABLE. ROUND TO FOUR DECIMAL PLACES.

18.

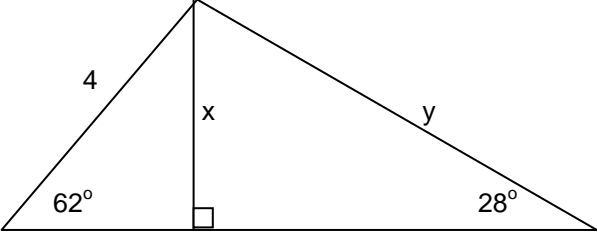


19.

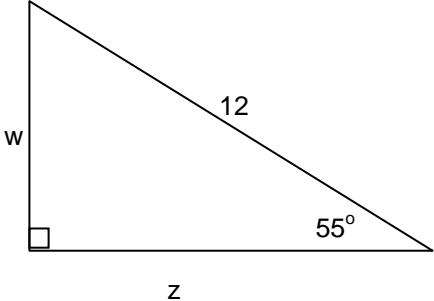


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20.



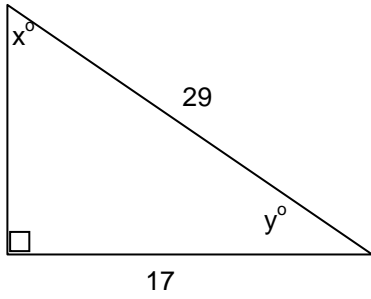
21.



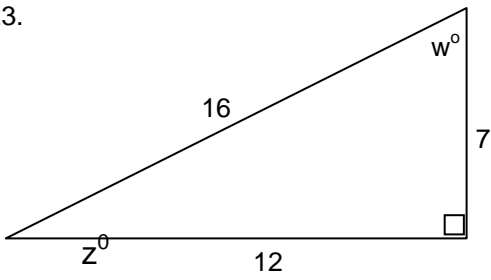
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USE TRIGONOMETRIC RATIOS TO FIND THE MISSING ANGLE MEASURES. ROUND TO THE FOUR DECIMAL PLACES.

22.



23.

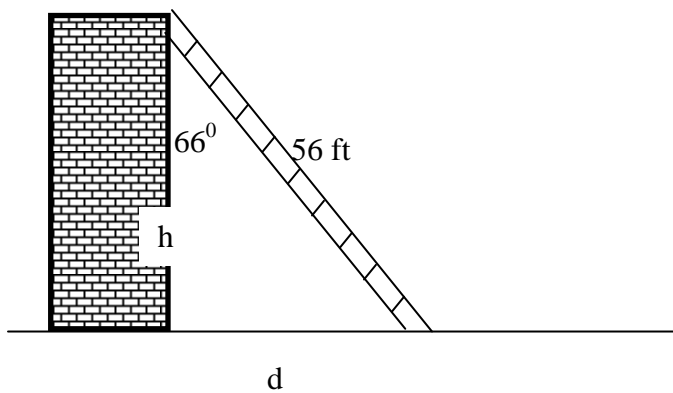


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SOLVE EACH PROBLEM USING TRIGONOMETRIC RATIOS. ROUND LENGTHS TO NEAREST TENTH AND ROUND TO FOUR DECIMAL PLACES.

24. A kite is flying 116 ft above the ground. The length of the string to the kite is 138 ft, measured from the ground. Find the angle measure that the string makes with the ground.

25. A 56 ft ladder is leaning against a building at an angle of  $66^\circ$ . Find the height of the building and the distance from the base of the building to the foot of the ladder.



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26. The angle of elevation from a ship to the top of a lighthouse is  $35^\circ$ . If the lighthouse is 85 ft tall, find the horizontal distance between the ship and the lighthouse.

27. The angle of depression from an airplane to the end of a runway is  $19^\circ$ . If the horizontal distance between the airplane and the end of the runway is 1200 ft., find the height of the airplane.

28. A high school softball diamond is a square. The distance from base to base is 57 ft. To the nearest foot, how far does the catcher throw the ball from home plate to second base?

