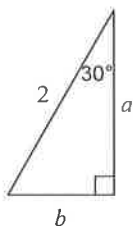


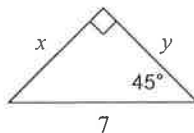
WS Practice 9.4 - 9.6

Find the missing side lengths. Leave your answers as radicals in simplest form.

1)

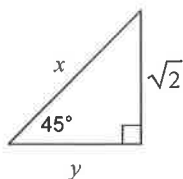


2)

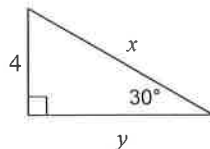


Find the exact area and perimeter of the triangles.

3)

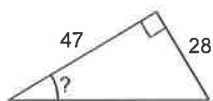


4)

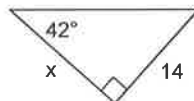


Find the missing value indicated. Round to the nearest tenth.

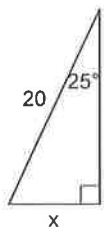
5)



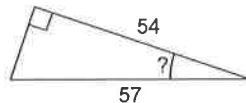
6)



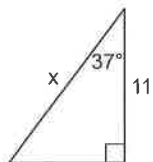
7)



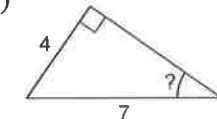
8)



9)

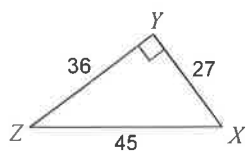


10)

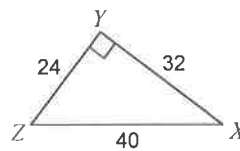


Find the value of each trigonometric ratio.

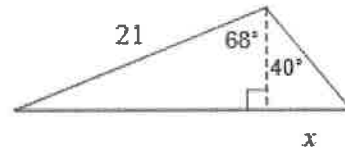
11)  $\cos Z$



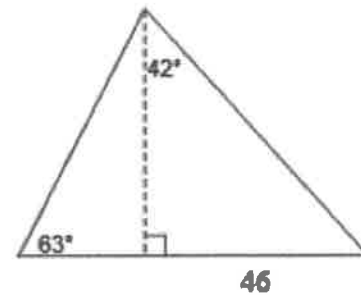
12)  $\tan Z$



13. Find the length of the side labeled  $x$ . Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth.

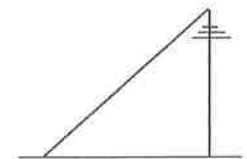


14. Find the area of the triangle. Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth.

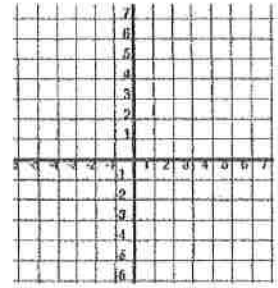


15. Joe is trying to find the height of a flagpole. The distance from the ground to his eyes is 6 feet and the distance from Joe to the flagpole is 15 feet. The angle formed from his horizontal line of sight to the top of the flagpole is  $65^\circ$ . Find the height of the flagpole to the nearest tenth.

16. A phone company is running a cable from the top of a 200 foot tower to the ground below. The cable makes a  $50^\circ$  with the ground. How many feet of cable would the company need if they were going to run **three** cables from the ground to the top of the tower.

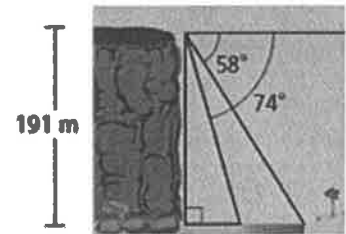


17. The coordinates of the vertices of  $\triangle MNP$  are  $M(-3, -2)$ ,  $N(-3, 5)$ , and  $P(6, 5)$ . Find the measure of angle P.



18. In triangle ABC where angle B = 90 degrees. If  $\sin A = 3/5$ , what is the  $\cos C$ ?

19. From the top of a canyon, the angle of depression to the far side of a river is 58 degrees, and the angle of depression to the near side of the river is 74 degrees. The depth of the canyon is 191 m. What is the width of the river at the bottom of the canyon? Round to the nearest tenth of a meter.



20. A forest ranger in a 120 ft observation tower sees a fire. The angle of depression to the fire is 3.5 degrees. What is the horizontal distance between the tower and the fire? Round to the nearest foot.

21. An observer in a hot-air balloon sights a building that is 50 m from the balloon's launch point. The balloon has risen 165 m. What is the angle of depression from the balloon to the building? Round to the nearest degree.

