

Unit 5: Right Triangle Trigonometry

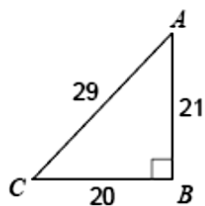
Day 6 Worksheet (PH 9-1 and 9-2)

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

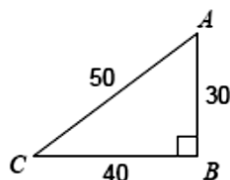
Date: \_\_\_\_\_ Hour: \_\_\_\_\_

Find the value of each trigonometric ratio. Express your answer as a fraction in lowest terms.

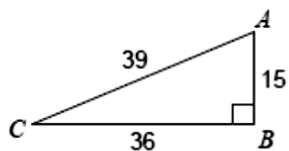
1)  $\sin C$



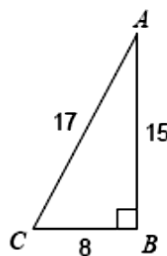
2)  $\sin C$



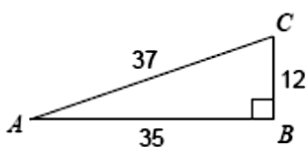
3)  $\cos C$



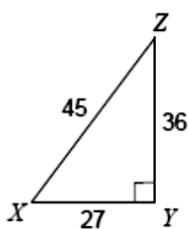
4)  $\cos C$



5)  $\tan A$



6)  $\tan X$



**Find the value of each trigonometric ratio to the nearest ten-thousandth.**

7)  $\sin 62^\circ$

8)  $\sin 14^\circ$

9)  $\cos 60^\circ$

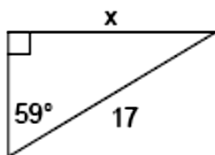
10)  $\cos 31^\circ$

11)  $\tan 79^\circ$

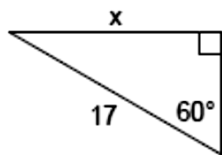
12)  $\tan 25^\circ$

**Find the missing side. Round to the nearest tenth.**

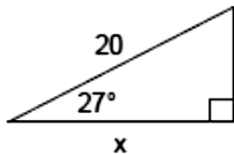
13)



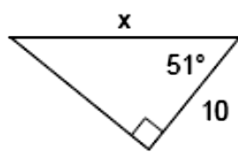
14)



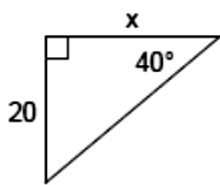
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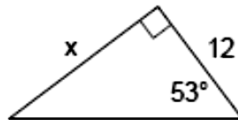
16)



17)

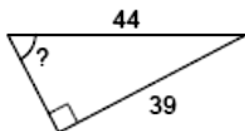


18)

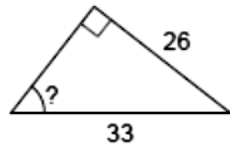


**Find the measure of the indicated angle to the nearest degree.**

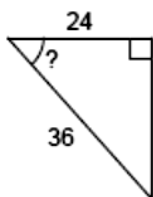
19)



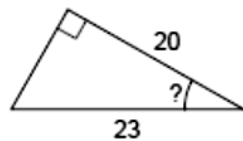
20)



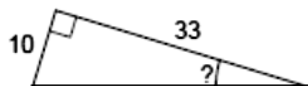
21)



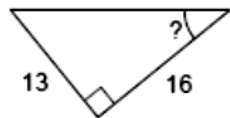
22)



23)



24)



**Find each angle measure to the nearest degree.**

25)  $\sin X = 0.7547$

26)  $\sin A = 0.4540$

27)  $\cos Y = 0.5736$

28)  $\cos B = 0.5000$

29)  $\tan B = 0.6249$

30)  $\tan C = 0.1405$

**Solve the following word problems. For each question, draw a diagram to help you.**

- 31) An airplane is flying at an altitude of 6000 m over the ocean directly toward a coastline. At a certain time, the angle of depression to the coastline from the airplane is  $14^\circ$ . How much farther (to the nearest kilometer) does the airplane have to fly before it is directly above the coastline?
- 32) From a horizontal distance of 80.0 m, the angle of elevation to the top of a flagpole is  $18^\circ$ . Calculate the height of the flagpole to the nearest tenth of a metre.
- 33) A 9.0 m ladder rests against the side of a wall. The bottom of the ladder is 1.5 m from the base of the wall. Determine the measure of the angle between the ladder and the ground, to the nearest degree.
- 34) The angle of elevation of the sun is  $68^\circ$  when a tree casts a shadow 14.3 m long. How tall is the tree, to the nearest tenth of a metre?
- 35) A wheelchair ramp is 4.2 m long. It rises 0.7 m. What is its angle of inclination to the nearest degree?
- 36) A person flying a kite has released 176 m of string. The string makes an angle of  $27^\circ$  with the ground. How high is the kite? How far away is the kite horizontally? Answer to the nearest metre.