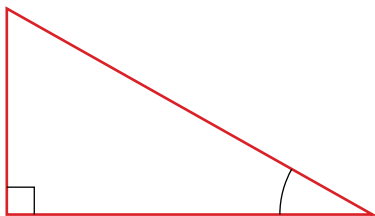


1. For the given right triangle, label the adjacent side, opposite side, and hypotenuse for the indicated angle.



2. When a right triangle with a hypotenuse of 1 is placed in the unit circle, which sides of the triangle correspond to the  $x$ - and  $y$ -coordinates?

3. The tangent of an angle compares which sides of the right triangle?

For the following exercises, find the lengths of the missing sides if side  $a$  is opposite angle  $A$ , side  $b$  is opposite angle  $B$ , and side  $c$  is the hypotenuse.

10.  $\cos B = \frac{4}{5}$ ,  $a = 10$

11.  $\sin B = \frac{1}{2}$ ,  $a = 20$

12.  $\tan A = \frac{5}{12}$ ,  $b = 6$

13.  $\tan A = 100$ ,  $b = 100$

For the following exercises, use **Figure 14** to evaluate each trigonometric function of angle  $A$ .

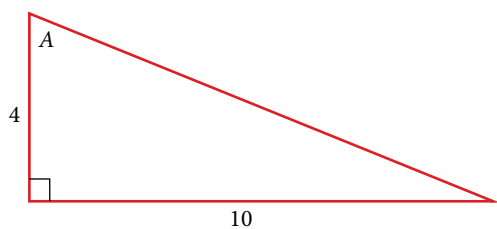


Figure 14

17.  $\sin A$

18.  $\cos A$

19.  $\tan A$

20.  $\csc A$

21.  $\sec A$

22.  $\cot A$

For the following exercises, use **Figure 15** to evaluate each trigonometric function of angle  $A$ .

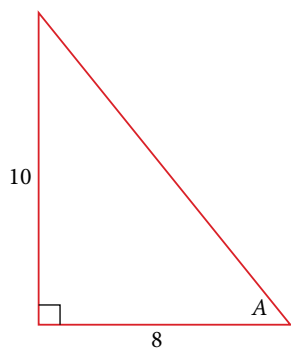


Figure 15

23.  $\sin A$

24.  $\cos A$

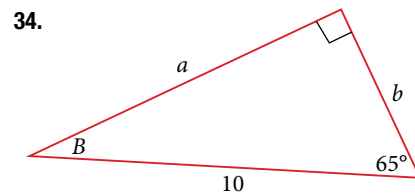
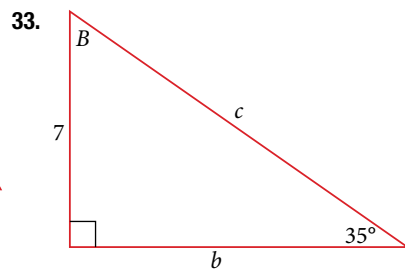
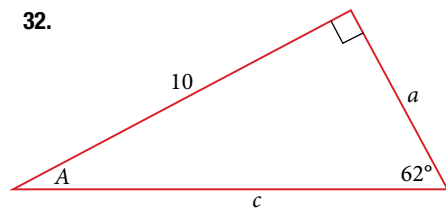
25.  $\tan A$

26.  $\csc A$

27.  $\sec A$

28.  $\cot A$

For the following exercises, use a calculator to find the length of each side to four decimal places.



**40.**  $a = 30$ ,  $\sphericalangle A = 27^\circ$

**41.**  $b = 3.5$ ,  $\sphericalangle A = 78^\circ$