

For the following exercises, find the requested value.

50. If  $\cos(t) = \frac{1}{7}$  and  $t$  is in the 4<sup>th</sup> quadrant, find  $\sin(t)$ .    51. If  $\cos(t) = \frac{2}{9}$  and  $t$  is in the 1<sup>st</sup> quadrant, find  $\sin(t)$ .

52. If  $\sin(t) = \frac{3}{8}$  and  $t$  is in the 2<sup>nd</sup> quadrant, find  $\cos(t)$ .    53. If  $\sin(t) = -\frac{1}{4}$  and  $t$  is in the 3<sup>rd</sup> quadrant, find  $\cos(t)$ .

54. Find the coordinates of the point on a circle with radius 15 corresponding to an angle of  $220^\circ$ .

55. Find the coordinates of the point on a circle with radius 20 corresponding to an angle of  $120^\circ$ .

56. Find the coordinates of the point on a circle with radius 8 corresponding to an angle of  $\frac{7\pi}{4}$ .

57. Find the coordinates of the point on a circle with radius 16 corresponding to an angle of  $\frac{5\pi}{9}$ .

58. State the domain of the sine and cosine functions.

59. State the range of the sine and cosine functions.

For the following exercises, find the exact value of each trigonometric function.

10.  $\sin \frac{\pi}{2}$

11.  $\sin \frac{\pi}{3}$

12.  $\cos \frac{\pi}{2}$

13.  $\cos \frac{\pi}{3}$

14.  $\sin \frac{\pi}{4}$

15.  $\cos \frac{\pi}{4}$

16.  $\sin \frac{\pi}{6}$

17.  $\sin \pi$

18.  $\sin \frac{3\pi}{2}$

19.  $\cos \pi$

20.  $\cos 0$

21.  $\cos \frac{\pi}{6}$