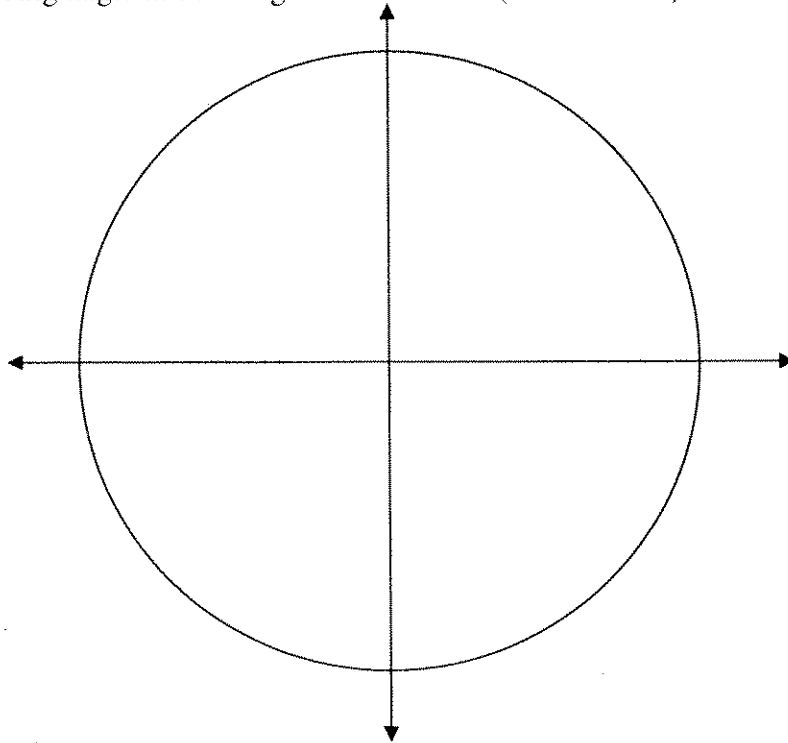


20. Sketch the unit circle below. Identify the coordinates of each point and give the measure of the corresponding angle in both degrees and radians (in terms of π).



Find the point (x, y) on the unit circle that corresponds to the real number t .

21. $t = -\frac{4\pi}{3}$ $\left(-\frac{1}{2}, \frac{\sqrt{3}}{2}\right)$

22. $t = \frac{11\pi}{4}$ $\left(-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2}\right)$

Give the exact value of the six trigonometric functions of each real number t .

23. $t = \frac{2\pi}{3}$

$\sin t = \frac{\sqrt{3}}{2}$ $\csc t = \frac{2\sqrt{3}}{3}$

$\cos t = -\frac{1}{2}$ $\sec t = -2$

$\tan t = -\sqrt{3}$ $\cot t = -\frac{\sqrt{3}}{3}$

24. $t = -\frac{3\pi}{4}$

$\sin t = -\frac{\sqrt{2}}{2}$ $\csc t = -\sqrt{2}$

$\cos t = -\frac{\sqrt{2}}{2}$ $\sec t = -\sqrt{2}$

$\tan t = 1$ $\cot t = 1$

Find each exact value.

25. $\tan \frac{9\pi}{4} = 1$

26. $\sin 11\pi = 0$

Use the given function value to find values for a and b .

27. $\cos t = \frac{3}{7}$

a. $\cos(-t) = \frac{3}{7}$

b. $\sec(t) = \frac{7}{3}$

28. $\sin t = \frac{1}{3}$

a. $\sin(-t) = -\frac{1}{3}$

b. $\csc(t) = 3$