

For each of the following, find **ALL** angles that meet the criterion. Give exact radian measures.

1. a. $\cos x = 1$

b. $\sin x = 1$

c. $\cos x = 0$

3. a. $\tan x = \text{und}$

b. $\tan x = 0$

c. $\csc x = 1$

5. a. $\csc x = -1$

b. $\sec x = -1$

c. $\cot x = \text{und}$

2. a. $\sin x = 0$

b. $\cos x = -1$

c. $\sin x = -1$

4. a. $\sec x = 1$

b. $\csc x = \text{und}$

c. $\sec x = \text{und}$

For each of the following, draw a diagram and show the approximate location for **ALL** angles that meet the criterion. Give exact angle measures or radians when appropriate.

6. $\cos x = \frac{\sqrt{3}}{2}$

7. $\sin \theta = 0.25$

8. $\tan x = -\sqrt{3}$

9. $\cos \theta = \frac{3}{4}$

10. $\csc x = \frac{2\sqrt{3}}{3}$

11. $\sin \theta = -1$

12. $\cot \theta = -5$

13. $\tan \theta = 2$

14. $\sec x = -\sqrt{2}$

15. $\sec \theta = \frac{5}{4}$

Multiple Answer:

For each radian or degree measure, choose the trigonometric values that are correct. **Multiple correct answers per question are possible.**

16. $x = \frac{5\pi}{3}$

a. $\sin x = \frac{1}{2}$

b. $\cos x = \frac{1}{2}$

c. $\sin x = -\frac{\sqrt{3}}{2}$

d. $\tan x = -\frac{\sqrt{3}}{3}$

e. $\cos x = \frac{\sqrt{3}}{2}$

17. $x = -\frac{5\pi}{6}$

a. $\sin x = -\frac{\sqrt{3}}{2}$

b. $\cos x = -\frac{1}{2}$

c. $\cos x = -\frac{\sqrt{3}}{2}$

d. $\tan x = \sqrt{3}$

e. $\tan x = \frac{\sqrt{3}}{3}$

18. $x = -\frac{\pi}{2}$

a. $\sin x = 0$

b. $\csc x = \text{und}$

c. $\tan x = \text{und}$

d. $\csc x = 0$

e. $\sec x = \text{und}$

19. $\theta = 135^\circ$

a. $\sec \theta = -\sqrt{2}$

b. $\csc x = -\sqrt{2}$

c. $\tan x = -1$

d. $\cot x = -1$

e. $\cos x = -\frac{\sqrt{2}}{2}$