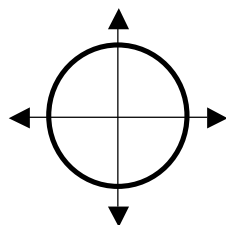


Directions - Draw all angles (usually 2) between 0 and 2π and name them (in radians).

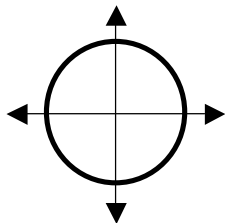
1. $\cos \theta = \frac{-\sqrt{3}}{2}$

$\theta =$ _____



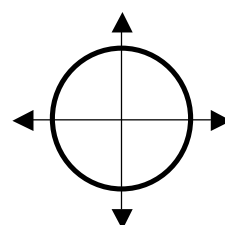
2. $\cot \theta = -\sqrt{3}$

$\theta =$ _____



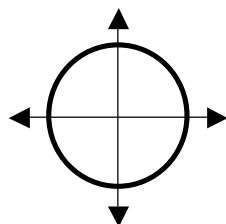
3. $\tan \theta = \text{undefined}$

$\theta =$ _____



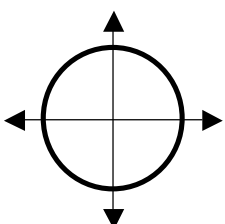
4. $\sin \theta = -1$

$\theta =$ _____



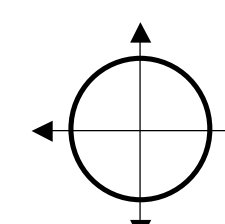
5. $\csc \theta = -2$

$\theta =$ _____



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

$\theta =$ _____



Directions: - Draw the smallest positive angle θ in standard position with given coordinates on its terminal side and evaluate the six trig functions of θ .

7. $(-1, -\sqrt{3})$

$\sin \theta =$ _____

$\cos \theta =$ _____

$\tan \theta =$ _____

$\csc \theta =$ _____

$\sec \theta =$ _____

$\cot \theta =$ _____

8. $(-3, -3)$

$\sin \theta =$ _____

$\cos \theta =$ _____

$\tan \theta =$ _____

$\csc \theta =$ _____

$\sec \theta =$ _____

$\cot \theta =$ _____

Directions: - Name the quadrants in which the terminal side of θ could lie.

9. $\cos \theta > 0$

10. $\csc \theta < 0$

11. $\cot \theta < 0$

12. $\csc \theta < 0, \tan \theta < 0$

13. $\sin \theta < 0, \tan \theta > 0$

14. $\sec \theta < 0, \sin \theta > 0$

Directions: - Evaluate the six trig functions of θ .

15. $\cos \theta = -\frac{1}{2}$ and θ is not
a 2nd quadrant angle.

16. $\cot \theta = -1$ and $\csc \theta < 0$

Directions: - Draw the smallest positive angle θ in the given quadrant and evaluate the six trig functions of θ .

17. $\cos \theta = \frac{2}{7}; IV$

18. $\cot \theta = \frac{1}{2}; III$

19. $\tan \theta = 3; I$

20. $\csc \theta = -1.25; III$

Directions: - Evaluate each expression, leaving the answer in simplest radical form

21. $\csc \frac{\pi}{2} \sin \frac{\pi}{2}$

22. $\sin \frac{2\pi}{3} \cos \frac{5\pi}{6} - \cos \frac{2\pi}{3} \sin \frac{5\pi}{6}$

23. $\cos^2 \pi + \sin^2 \pi$

24. $\cos^2 \frac{3\pi}{4} - \sin^2 \frac{\pi}{3}$

25. $\tan \frac{\pi}{6} \cot \frac{\pi}{3} + \tan \frac{\pi}{4}$

Answers:

Problems 1-6: Scrambled

$\frac{3\pi}{4}, \frac{5\pi}{4}$

$\frac{5\pi}{6}, \frac{11\pi}{6}$

$\frac{5\pi}{6}, \frac{7\pi}{6}$

$\frac{7\pi}{6}, \frac{11\pi}{6}$

$\frac{\pi}{2}, \frac{3\pi}{2}$

$\frac{3\pi}{2}$

7. $-\frac{\sqrt{3}}{2}, -\frac{1}{2}, \sqrt{3}, -\frac{2\sqrt{3}}{3}, -2, \frac{\sqrt{3}}{3}$

8. $-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2}, 1, -\sqrt{2}, -\sqrt{2}, 1$

Problems 9-14: Scrambled

I, IV

II

II, IV

III, IV

III

IV

Problems 21-25:

21. 1

22. $-\frac{1}{2}$

23. 1

24. $-\frac{1}{4}$

25. $\frac{4}{3}$

Problems 15-20: Scrambled

$\frac{-3\sqrt{5}}{7}, \frac{2}{7}, \frac{-3\sqrt{5}}{2}, \frac{-7\sqrt{5}}{15}, \frac{7}{2}, \frac{-2\sqrt{5}}{15}$

$\frac{-2\sqrt{5}}{5}, \frac{-\sqrt{5}}{5}, 2, \frac{-\sqrt{5}}{2}, -\sqrt{5}, \frac{1}{2}$

$\frac{-\sqrt{3}}{2}, \frac{-1}{2}, \sqrt{3}, \frac{-2\sqrt{3}}{3}, -2, \frac{\sqrt{3}}{3}$

$\frac{-\sqrt{2}}{2}, \frac{\sqrt{2}}{2}, -1, -\sqrt{2}, \sqrt{2}, -1$

$\frac{3\sqrt{10}}{10}, \frac{\sqrt{10}}{10}, 3, \frac{\sqrt{10}}{3}, \sqrt{10}, \frac{1}{3}$

$\frac{-4}{5}, \frac{-3}{5}, \frac{4}{3}, \frac{-5}{4}, \frac{-5}{3}, \frac{3}{4}$