

Match each angle in the first column with its coterminal angle in the second column.

- B 1. 84°
- D 2. 400°
- E 3. -32°
- C 4. 192°
- A 5. -60°

- A. 300°
- B. -276°
- C. -168°
- D. -320°
- E. 328°
- F. 320°

Express each of the following angles as a positive angle in π radians.

6. 10° $\frac{\pi}{18}$
 9. 75° $\frac{5\pi}{12}$

7. -240° $\frac{2\pi}{3}$
 10. 450° $\frac{5\pi}{2}$

8. 300° $\frac{5\pi}{3}$
 11. -90° $\frac{3\pi}{2}$

Express each of the following angles as a positive angle in degrees.

12. $\frac{\pi}{3}$ 60°

13. $-\frac{5\pi}{12}$ 285°

14. $\frac{7\pi}{4}$ 315°

15. 3π 540°

16. $-\frac{3\pi}{2}$ 90°

17. $\frac{5\pi}{6}$ 150°

State the quadrant or axis containing the terminal side of each angle.

18. 240° III

19. -135° III

20. 270° y-axis

21. -225° II

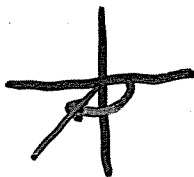
22. 390° I

23. -540° x-axis

Sketch the following angles in standard position by placing the terminal ray in the correct quadrant and denoting direction with an arrow. Then give the measure of the angle in both degrees and π radians.

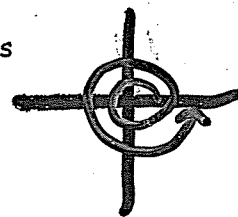
24. $\frac{1}{3}$ clockwise revolution

-120°
 $-\frac{2\pi}{3}$



25. 2 counterclockwise revolutions

4π
 720°



Convert each decimal radian measure to the nearest tenth of a degree.

26. 4 229.2°

27. -7 -401.1°

28. 0.4 22.9°

29. -2.5 -143.2°