

Pre 4-1 Assign-Key

Tuesday, February 4, 2025 3:15 PM

Write each angle as a radian in terms of π and as a decimal to the nearest thousandth.

1. 35°
 $35^\circ \times \frac{\pi}{180^\circ} = \frac{7\pi}{36}$
 $= 0.611$

2. 252°
 $252^\circ \times \frac{\pi}{180^\circ} = \frac{7\pi}{5}$
 4.398

3. 90°
 $\frac{\pi}{2} = 1.571$

4. -30°
 $-\frac{\pi}{6} = -0.524$

9. 330°
 $\frac{11\pi}{6} = 5.760$

10. -150°
 $-\frac{5\pi}{6} = -2.618$

11. 200°
 $200^\circ \times \frac{\pi}{180^\circ} = \frac{10\pi}{9} = 3.491$

12. -306°
 $-306^\circ \times \frac{\pi}{180^\circ} = \frac{-17\pi}{10} = -5.341$

Write each radian measure in degree form.

13. $\frac{11\pi}{12}$
 $\frac{11\pi}{12} \times \frac{180^\circ}{\pi} = 165^\circ$

14. $\frac{19\pi}{15}$
 $\frac{19\pi}{15} \times \frac{180^\circ}{\pi} = 228^\circ$

15. $\frac{\pi}{4}$
 45°

16. $-\frac{13\pi}{6}$
 -390°

21. 5
 $5 \times \frac{180^\circ}{\pi} = 286.479^\circ$

22. 2
 $2\pi \times \frac{180^\circ}{\pi} = 114.591^\circ$

23. -3
 -171.987°

24. $\frac{1}{2}$
 28.648°

33. 2.6
 148.969°

34. 4.5
 257.831°

35. 0.6
 34.377°

36. -1.3
 -74.485°

A central angle of a circle of radius r measures θ radians. For the given values of r and θ , find (a) the length of the intercepted arc and (b) the area of the related sector.

41. $r=4, \theta=2$
 a) 8
 b) 16

42. $r=5, \theta=0.5$
 a) 2.5
 b) 6.25

43. $r=6, \theta=3$
 a) 18
 b) 54

44. $r=10, \theta=2.5$
 a) $\frac{s}{10} = \frac{2.5}{1}$
 $s = 25$
 b) 125