

1. Convert 300°

Solution:

$$300 \cdot \frac{\pi}{180} \text{ rad} = \frac{5\pi}{3}$$

2. Convert 30°

Solution:

$$\pi/6$$

3. How many radii fit on the circumference of half a circle?

Solution: π radii fit on the circumference of half a circle.

4. How many radii fit on an entire circle

Solution: 2π radii fit on the circumference of a circle.

5. If the radius of a circle is 5 inches long, how long is the circumference of half of the circle?

Solution:

$$\pi \cdot 5 \approx 3.1416 \times 5 = 15.708$$

6. Convert 1

Solution:

$$1 \cdot \frac{180^\circ}{\pi} \approx 57.2956^\circ$$

7. Convert 3°

Solution:

$$3^\circ \cdot \frac{\pi \text{ rad}}{180^\circ} = \frac{\pi}{60} \text{ rad}$$

8. Convert 1°

Solution:

$$1^\circ \cdot \frac{\pi \text{ rad}}{180^\circ} = \frac{\pi}{180} \text{ rad}$$

9. Convert $\frac{-5\pi}{6}$

Solution:

each $\pi/6$ is 30° thus...

$$\frac{-5\pi}{6} = -5(30^\circ) = -150^\circ$$

10. What is one radian?

Solution: unit of measurement of angles; equivalent to the measurement of the angles created by an arc of a circle of the same size as the radius of the circle.

11. Convert 170°

Solution:

$$170^\circ \cdot \frac{\pi \text{ rad}}{180^\circ} = \frac{17\pi}{18}$$

12. If the radius of a circle is 7 inches long, how long is the circumference of the entire circle.

Solution:

$$2 \cdot \pi \cdot 7$$

13. Convert 4

Solution:

$$4 \cdot \frac{180^\circ}{\pi \text{ rad}} \approx 229.18^\circ$$

14. Convert 3

Solution:

$$3 \cdot \frac{180^\circ}{\pi \text{ rad}} \approx 171.89^\circ$$

15. Convert $\frac{5\pi}{12}$

Solution:

$$\frac{5\pi}{12} \cdot \frac{180^\circ}{\pi} = 75^\circ$$

16. Convert 50°

Solution:

$$50^\circ \cdot \frac{\pi \text{ rad}}{180^\circ} = \frac{5\pi}{18}$$

17. Determine if:

$$\pi \approx 3.14$$

A. True

B. False

18. Convert 60°

Solution:

$$\pi/3$$

19. Convert 225°

Solution:

$$225 \cdot \frac{\pi}{180} \text{rad} = \frac{5\pi}{4}$$

20. If the radius of a circle is 5 inches long, how long is the circumference of the circle?

Solution:

$$2 \cdot \pi \cdot 5$$

21. Determine if:

$$\pi = 3.14$$

A. True

B. False

22. Convert 1 rad

Solution:

$$1 \cdot \frac{180^\circ}{\pi \text{rad}} \approx 57.2956^\circ$$

23. If the radius of a circle is *blah* inches long, how long is the circumference of the entire circle.

Solution:

$$2 \cdot \pi \cdot \text{blah}$$

24. Convert $\frac{11\pi}{12}$

Solution:

$$\frac{11\pi}{12} \cdot \frac{180^\circ}{\pi} = 165^\circ$$

25. Convert 390°

Solution:

$$390 \cdot \frac{\pi}{180} \text{rad} = \frac{13\pi}{6}$$

26. Convert 2

Solution:

$$2 \cdot \frac{180^\circ}{\pi \text{rad}} \approx 114.59^\circ$$

27. Convert $\frac{\pi}{12}$

Solution:

$$\frac{\pi}{12} \cdot \frac{180^\circ}{\pi} = 15^\circ$$

28. If the radius of a circle is r inches long, how long is the circumference of the entire circle.

Solution:

$$2 \cdot \pi \cdot r$$

29. What is one degree?

Solution: unit of measurement of angles; equivalent to the measurement of the angles created by $1/360$ of a circle.

30. Convert 10°

Solution:

$$10 \cdot \frac{\pi}{180} \text{rad} = \frac{\pi}{18} \text{rad} \approx .175 \text{rad}$$