

Change each measure to degrees, minutes, and seconds.

1. 28.955°

2. -57.327°

3. 34.95°

4. -72.775°

Write each measure as a decimal degree to the nearest thousandth.

5. $32^\circ 28' 10''$

6. $-73^\circ 14' 35''$

7. $-128^\circ 30' 45''$

8. $29^\circ 6' 6''$

Give the angle measure represented by each rotation.

9. 1.5 rotations clockwise

10. 2.6 rotations counterclockwise

11. 2.25 rotations counterclockwise

12. 5.75 rotations clockwise

13. How many degrees are represented by 4 counterclockwise revolutions?

Identify all angles that are coterminal with each angle. Then find one positive angle and one negative angle that are coterminal with each angle.

14. 43°

15. -30°

16. -45°

17. 113°

Find the measure of the reference angle for each angle.

18. 227°

19. 640°

20. 327°

21. 148°

22. 563°

23. -420°

24. -197°

25. 1045°

26. Name four angles between 0° and 360° with a reference angle of 20° .

27. During the winter, a competitive bike rider trains on a stationary bike. Her trainer wants her to warm up for 5 to 10 minutes by pedaling slowly. Then she is to increase the pace to 95 revolutions per second. Through how many degrees does it travel in a second? In a minute?

28. Write an expression that represents any angle that is coterminal with a 25° angle, a 145° angle, and a 265° angle.