

## LESSON

**Practice B****13-3** *The Unit Circle*

Convert each measure from degrees to radians or from radians to degrees.

1.  $\frac{5\pi}{12}$

\_\_\_\_\_

2.  $215^\circ$

\_\_\_\_\_

3.  $-\frac{29\pi}{18}$

\_\_\_\_\_

4.  $-180^\circ$

\_\_\_\_\_

5.  $\frac{5\pi}{3}$

\_\_\_\_\_

6.  $-\frac{7\pi}{6}$

\_\_\_\_\_

7.  $400^\circ$

\_\_\_\_\_

8.  $\frac{3\pi}{10}$

\_\_\_\_\_

9.  $35^\circ$

\_\_\_\_\_

Use the unit circle to find the exact value of each trigonometric function.

10.  $\cos \frac{2\pi}{3}$

\_\_\_\_\_

11.  $\tan \frac{5\pi}{4}$

\_\_\_\_\_

12.  $\tan \frac{5\pi}{6}$

\_\_\_\_\_

13.  $\sin 315^\circ$

\_\_\_\_\_

14.  $\cos 225^\circ$

\_\_\_\_\_

15.  $\tan 60^\circ$

\_\_\_\_\_

Use a reference angle to find the exact value of the sine, cosine, and tangent of each angle.

16.  $150^\circ$

\_\_\_\_\_

17.  $-225^\circ$

\_\_\_\_\_

18.  $-300^\circ$

\_\_\_\_\_

19.  $\frac{11\pi}{6}$

\_\_\_\_\_

20.  $-\frac{2\pi}{3}$

\_\_\_\_\_

21.  $\frac{5\pi}{4}$

\_\_\_\_\_

Solve.

22. San Antonio, Texas, is located about  $30^\circ$  north of the equator. If Earth's radius is about 3959 miles, approximately how many miles is San Antonio from the equator?

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