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## BOOK WORK: p. 947 (19-29 odd - optional)

(Required: 31 - 37 odd, 38, 39, 41 - 45, 48, 51, 52)
Convert each measure from degrees to radians or from radians to degrees.

1. $-\frac{3 \pi}{2}$
2. $450^{\circ}$
3. $\frac{5 \pi}{18}$
4. $-200^{\circ}$
5. $\frac{7 \pi}{4}$
6. $-\frac{11 \pi}{6}$
7. $350^{\circ}$
8. $\frac{7 \pi}{20}$
9. $12^{\circ}$
$\qquad$
$\qquad$
$\qquad$

Find the exact value of the sine, cosine, and tangent of each angle.
13. $330^{\circ}$
14. $\frac{7 \pi}{4}$
15. $240^{\circ}$
16. $\frac{5 \pi}{6}$
17. $225^{\circ}$
18. $120^{\circ}$
19. $45^{\circ}$
20. $-\pi$
21. $-\frac{5 \pi}{6}$
22. $-\frac{\pi}{4}$
23. $-\frac{\pi}{3}$
24. $135^{\circ}$
$\qquad$ DATE $\qquad$ PERIOD $\qquad$
25. A pendulum is 18 feet long. Its central angle is $44^{\circ}$. The pendulum makes one back and forth swing every 12 seconds. To the nearest foot, how far does the pendulum swing each minute?
26. 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?

Use unit circle as needed:


