

**DO ALL WORK NEATLY ON A SEPARATE SHEET OF PAPER**

Draw an angle with the given measure in standard position

- 1)  $210^\circ$                       2)  $305^\circ$                       3)  $580^\circ$   
4)  $135^\circ$                       5)  $-450^\circ$                       6)  $-560^\circ$

Find one angle with positive measurement and one angle with negative measurement coterminal with each given angle.

- 7)  $65^\circ$                       8)  $80^\circ$                       9)  $285^\circ$   
10)  $110^\circ$                       11)  $-37^\circ$                       12)  $-93^\circ$

13) Find the degree measure of the angle through which the hour hand on the clock rotates from 5:00am to 10:00am.

Find the exact values of  $\sin \theta$ ,  $\cos \theta$ , and  $\tan \theta$  if the terminal side of  $\theta$  in standard position contains the given point.

- 14)  $(6, 8)$                       15)  $(-20, 21)$                       16)  $(-2, -5)$

Find the reference angle for the angle with the given measure.

- 17)  $236^\circ$                       18)  $-97^\circ$                       19)  $-210^\circ$

Find the exact value of each trigonometric function.

- 20)  $\tan 135^\circ$                       21)  $\sin 210^\circ$                       22)  $\sin(-90^\circ)$

Suppose  $\theta$  is an angle in standard position whose terminal side is in the given quadrant. For each function, find the exact values of the functions listed.

23) Given  $\tan \theta = -\frac{12}{5}$  in Quadrant IV, find  $\sin \theta$  and  $\cos \theta$ .

24) Given  $\sin \theta = \frac{2}{3}$  in Quadrant II, find  $\cos \theta$  and  $\tan \theta$ .