

## Unit 1.5 Trigonometric Functions of Non-Acute Angles PRACTICE

Complete the table with exact trigonometric function values.

1)

$\theta$	$\sin \theta$	$\cos \theta$	$\tan \theta$	$\csc \theta$	$\sec \theta$	$\cot \theta$
$30^\circ$						
$45^\circ$						
$60^\circ$						
$120^\circ$						
$135^\circ$						
$150^\circ$						
$210^\circ$						
$225^\circ$						
$240^\circ$						
$300^\circ$						
$315^\circ$						
$330^\circ$						

Match each angle in Column I, with its reference angle in Column II.

Column I

Column II

2)  $98^\circ$

3)  $212^\circ$

A.  $45^\circ$

B.  $60^\circ$

4)  $-135^\circ$

5)  $-60^\circ$

C.  $82^\circ$

D.  $30^\circ$

6)  $750^\circ$

7)  $480^\circ$

E.  $38^\circ$

F.  $32^\circ$

Suppose  $\theta$  is in the interval  $(90^\circ, 180^\circ)$ . Find the sign of each of the following.

8)  $\sin \frac{\theta}{2}$

9)  $\cos \frac{\theta}{2}$

10)  $\cot(\theta + 180^\circ)$

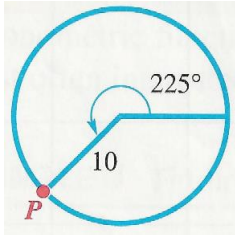
11)  $\sec(\theta + 180^\circ)$

12)  $\cos(-\theta)$

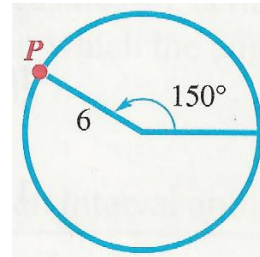
13)  $\sin(-\theta)$

Find the coordinates of the point P on the circumference of each circle.  
 (Hint: Add x- and y-axes, assuming that the angle is in standard position.)

14)



15)



Find exact values of the six trigonometric functions for each angle. Rationalize denominators when applicable.

16)  $300^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

17)  $315^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

18)  $405^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

19)  $-300^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

20)  $420^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

21)  $480^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

22)  $495^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

23)  $570^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

24)  $750^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

25)  $1305^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

26)  $1500^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

27)  $2670^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

28)  $-390^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

29)  $-510^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

30)  $-1020^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$

31)  $-1290^\circ$      $\sin B = \underline{\hspace{1cm}}$      $\cos B = \underline{\hspace{1cm}}$      $\tan B = \underline{\hspace{1cm}}$      $\csc B = \underline{\hspace{1cm}}$      $\sec B = \underline{\hspace{1cm}}$      $\cot B = \underline{\hspace{1cm}}$