

# Chapter 13 Test

Name: Key

Change each degree measure to radian measure.

1.  $-90^\circ$   $-\frac{\pi}{2}$

2.  $135^\circ$   $\frac{3}{4}\pi$

3.  $540^\circ$   $3\pi$

4.  $150^\circ$   $\frac{5}{6}\pi$

Change each radian measure to degree measure.

5.  $\pi$   $180^\circ$

6.  $-8\pi/3$   $-480^\circ$

7.  $5\pi/2$   $450^\circ$

8.  $5\pi$   $900^\circ$

Find one positive angle and one negative angle that are coterminal with each angle.

9.  $-120^\circ$   $240$   
 $-480$

10.  $310^\circ$   $670$   
 $-50$

11.  $9\pi/4$   $\frac{\pi}{4}$   
 $-\frac{7}{4}\pi$

12.  $-8\pi/3$   $\frac{4}{3}\pi$   
 $-\frac{2}{3}\pi$

Solve each right triangle. Find the missing angles and sides.

13.  $A = 56^\circ$        $c = 16$

$$B = 34^\circ$$

$$b = 8.9$$

$$a = 13.3$$

14.  $B = 30^\circ$        $b = 11$

$$A = 60^\circ$$

$$c = 22$$

$$a = 19.1$$

15.  $b = 52$        $c = 95$

$$a = 79.5$$

$$B = 33.2^\circ$$

$$A = 56.8^\circ$$

Solve each non-right triangle.

16.  $A = 50^\circ$        $B = 30^\circ$        $c = 9$

$$C = 100^\circ$$

$$a = 7$$

$$b = 4.6$$

17.  $a = 25$        $b = 30$        $A = 46.3^\circ$

$$B = 60.2^\circ$$

$$c = 33.2$$

$$C = 73.5^\circ$$

Determine whether each triangle has no solution, one solution, or two solutions. Then solve each triangle.

18.  $A = 30^\circ$        $a = 20$        $b = 11$       1  $\Delta$

$B = 16^\circ$        $c = 28.77$

$C = 134^\circ$

19.  $A = 30^\circ$        $b = 16$        $a = 7$

No Soln

20.  $A = 30^\circ$        $a = 10$        $b = 16$

2  $\Delta$ 's

①  $B = 53.1^\circ$

$C = 96.9^\circ$

$c = 19.9$

②  $B = 126.9^\circ$

$C = 23.1^\circ$

$c = 7.85$