

## Chapter 3

13. For a circle of radius 3 feet, find the arc length  $s$  subtended by a central angle of  $6^\circ$ .
14. Convert  $171^\circ$  to radian measure. Give the exact answer.
15. Find the exact value of  $\sin \frac{\pi}{4} - \tan \frac{\pi}{4}$ . Do not use a calculator.
- $\frac{2\sqrt{3}-3}{6}$
  - $\frac{1}{2}$
  - $\frac{-\sqrt{3}}{2}$
  - $\frac{\sqrt{2}-2}{2}$
16. If  $f(x) = \tan x$  and  $f(a) = 9$ , find the exact value of  $f(a) + f(a + 3\pi) + f(a - 3\pi)$ .
- 9
  - $\frac{1}{9}$
  - $\frac{1}{3}$
  - 27
17. Find the exact value of  $\tan\left(-\frac{2}{3}\pi\right)$ .
18. Find the amplitude and period of  $f(x) = -8\sin(2x)$ .

## QUESTIONS ON THE CHAPTER TWO TEST

1. SOLVE FOR  $C$  WHEN  $\angle C = 90^\circ$ ,  $\angle A = 32^\circ$ , AND  $A = 26$
2. SOLVE FOR  $C$  WHEN  $\angle C = 90^\circ$ ,  $\angle B = 40^\circ$ , AND  $B = 16$
3. SOLVE FOR  $A$  WHEN  $\angle C = 90^\circ$ ,  $\angle A = 25^\circ$ , AND  $B = 12$
4. SOLVE FOR  $B$  WHEN  $\angle C = 90^\circ$ ,  $\angle B = 62^\circ$ , AND  $C = 18$
  
5. SOLVE FOR  $C$  WHEN  $\angle C = 125^\circ$ ,  $A = 6$ , AND  $B = 4$
6. SOLVE FOR  $A$  WHEN  $\angle A = 20^\circ$ ,  $B = 12$ , AND  $C = 10$
7. SOLVE FOR  $\cos \angle B$ ,  $A = 12$ ,  $B = 8$ , AND  $C = 16$
  
8. SOLVE FOR  $A$  WHEN  $\angle A = 32^\circ$ ,  $\angle B = 22^\circ$ , AND  $B = 6$
9. SOLVE FOR  $C$  WHEN  $\angle B = 12^\circ$ ,  $\angle C = 20^\circ$ , AND  $B = 2$
  
10. FIND THE SIZE OF THE SMALLEST ANGLE, WHERE  
THE SIDES MEASURE 7 INCHES, 8 INCHES, AND 10 INCHES.

## QUESTIONS ON THE CHAPTERS ONE TEST

WHAT IS THE REFERENCE ANGLE COTERMINAL WITH

1. -680
2. -1343
3. 755

CONVERT THE FOLLOWING TO DEGREES, MINUTES, AND SECONDS

4.  $55.265^\circ$
5.  $17.2143^\circ$
6.  $89.998^\circ$
  
7. SOLVE FOR  $x$ .  $\sin^2\theta + \cos^2\theta = x$ .
8. CONVERT  $45^\circ$  TO RADIANS.
9. WHAT ACUTE ANGLE HAS A TANGENT OF 3.4?
10. FIND THE  $\sin$  AND  $\tan$  IF THE  $\cos$  IS THE SQUARE ROOT OF TWO DIVIDED BY 2.