

Review Questions Trigonometry Exam

Name Answer key

Find each solution:

1.  $y = \sin \frac{3\pi}{4}$   
 $= \sin 135^\circ$   
 ref  $\angle 45^\circ$

$y = \frac{\sqrt{2}}{2}$

2.  $y = \sin \frac{5\pi}{3}$   
 $= \sin 300^\circ$   
 ref  $\angle 60^\circ$

$y = -\frac{\sqrt{3}}{2}$

3.  $y = \sin \frac{5\pi}{6}$   
 $= \sin 150^\circ$   
 ref  $\angle 30^\circ$

$y = \frac{1}{2}$

4.  $y = \sin \frac{5\pi}{2}$   
 $= \sin 450^\circ$   
 Coterminal with  $\sin 90^\circ$

$y = 1$

5.  $\cos \theta = \frac{\sqrt{2}}{2}$   
 ref  $\angle 45^\circ$

$\theta = 45^\circ, 315^\circ$

6.  $\cos \theta = -\frac{\sqrt{3}}{2}$   
 ref  $\angle 30^\circ$

$\theta = 150^\circ, 210^\circ$

7.  $\cos \theta = \frac{1}{2}$   
 ref  $\angle 60^\circ$

$\theta = 60^\circ, 300^\circ$

8.  $\cos \theta = 0$

$\theta = 90^\circ, 270^\circ$

9.  $y = \tan^{-1} \sqrt{3}$

$y = 60^\circ$

10.  $y = \tan^{-1} -\frac{\sqrt{3}}{3}$   
 ref  $\angle 30^\circ$

$y = -30^\circ$

11.  $y = \sec^{-1} -\sqrt{2}$   
 ref  $\angle 45^\circ$

$y = 135^\circ$

12.  $y = \tan^{-1} -1$   
 ref  $\angle 45^\circ$

$y = -45^\circ$

13.  $\sec \theta = \frac{2\sqrt{3}}{3}$   
 ref  $\angle 30^\circ$

$\theta = 30^\circ, 330^\circ$

14.  $y = \cot \frac{17\pi}{6}$   
 $= \cot 510^\circ$   
 Coterminal with  
 $= \cot 150^\circ$   
 ref  $\angle 30^\circ$

$y = -\sqrt{3}$

15.  $\sin \frac{5\pi}{6} + \cot \frac{3\pi}{4}$   
 $= \sin 150^\circ + \cot 135^\circ$   
 ref  $\angle 30^\circ$       ref  $\angle 45^\circ$   
 $= \frac{1}{2} + (-1)$

$= -\frac{1}{2}$

16.  $\csc \theta = -2$   
 ref  $\angle 30^\circ$

$\theta = 210^\circ, 330^\circ$