

T/PC

Trig Review - Ch 4

Day 2

p. 400-401

 2, 6, 14, 18, 24, 35, 62, 64, 78
 80, 82, 85, 86, 93, 96

2. Quadrant II; $\frac{3\pi}{4} \cdot \frac{180^\circ}{\pi} = 135^\circ$.

6. Quadrant II; $112^\circ \cdot \frac{\pi}{180^\circ} = \frac{28\pi}{45}$.

14. $\theta = 225^\circ = \frac{5\pi}{4}$ radians

18. $\cos 330^\circ = \frac{\sqrt{3}}{2}$

24. $\tan\left(-\frac{2\pi}{3}\right) = -\sqrt{3}$

35. Draw a right triangle with legs 8 (adjacent) and 15, and hypotenuse $\sqrt{8^2 + 15^2} = \sqrt{289} = 17$.

$$\sin \theta = \frac{15}{17}, \cos \theta = \frac{8}{17}, \tan \theta = \frac{15}{8}; \csc \theta = \frac{17}{15},$$

$$\sec \theta = \frac{17}{8}, \cot \theta = \frac{8}{15}.$$

62. $g(x) = 3 \cos 4x$. Amplitude: 3; period: $\frac{\pi}{2}$; phase shift: 0; domain: $(-\infty, \infty)$; range: $[-3, 3]$.

64. $g(x) = -2 \sin\left[3\left(x - \frac{\pi}{9}\right)\right]$. Amplitude: 2; period: $\frac{2\pi}{3}$; phase shift: $\frac{\pi}{9}$; domain: $(-\infty, \infty)$; range: $[-2, 2]$.

78. $x = \frac{\pi}{6}$

85. $\tan(\tan^{-1} 1) = \tan \frac{\pi}{4} = 1$

80. $\frac{5\pi}{3}$

86. $\cos^{-1}\left(\cos \frac{\pi}{3}\right) = \cos^{-1} \frac{1}{2} = \frac{\pi}{3}$

82. $\frac{5\pi}{6}$

* 93. $s = r\theta = (2)\left(\frac{2\pi}{3}\right) = \frac{4\pi}{3}$

Remember- if θ is in degrees, you must convert to radians to use $s = r\theta$!

96. $\tan 25^\circ = \frac{h}{51 \text{ ft}}$, so $h = 51 \tan 25^\circ \approx 23.8 \text{ ft}$.

