

Chapter 6

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- 0.7431
 - 0.9781
 - 0.8391
 - 0.6428
 - 0.9659
 - 0.5000
 - undefined
 - 0.9969
- 135.0°
 - 220.0°
 - 200.5°
 - 335.2°
- 0.7854
 - 3.6652
 - 2.4435
 - 5.9341
- All angles have a vertex of (0, 0), initial arm on the positive x-axis, and counterclockwise rotation.

 - terminal arm rotated counterclockwise in first quadrant passing through (6, 8); $\sin \theta = \frac{4}{5}$, $\cos \theta = \frac{3}{5}$, $\tan \theta = \frac{4}{3}$, $\theta \doteq 53^\circ$
 - terminal arm rotated counterclockwise in second quadrant passing through (-2, 4); $\sin \theta = \frac{2}{\sqrt{5}}$, $\cos \theta = \frac{-1}{\sqrt{5}}$, $\tan \theta = -2$, $\theta \doteq 117^\circ$
 - terminal arm rotated counterclockwise in third quadrant passing through (-2, -5); $\sin \theta = \frac{-5}{\sqrt{29}}$, $\cos \theta = \frac{-2}{\sqrt{29}}$, $\tan \theta = \frac{5}{2}$, $\theta \doteq 248^\circ$
 - terminal arm rotated counterclockwise in fourth quadrant passing through (1, -2); $\sin \theta = \frac{-2}{\sqrt{5}}$, $\cos \theta = \frac{1}{\sqrt{5}}$, $\tan \theta = -2$, $\theta \doteq 297^\circ$
- 90°
 - 180°
 - 45°
 - 90°, 270°
 - 60°, 300°
 - 210°, 330°
 - 0°, 180°, 360°
 - 135°, 315°
- 199.5°, 340.5°
 - 131.8°, 228.2°
 - 63.4°, 243.4°
 - 270.0°
- 1.3, 5.0
 - 2.4, 5.5
 - 3.3, 6.1
 - 1.0, 5.2
- amplitude: 1, period: $\frac{2\pi}{3}$, phase shift: 0, vertical shift: 0
 - amplitude: 3, period: 2π , phase shift: left $\frac{\pi}{2}$, vertical shift: 0
 - amplitude: ∞ , period: π , phase shift: 0, vertical shift: down 1
 - amplitude: 2, period: 720° , phase shift: right 30° , vertical shift: up 2
 - amplitude: ∞ , period: $\frac{\pi}{3}$, phase shift: 0, vertical shift: 0
 - amplitude: 1, period: π , phase shift: left $\frac{\pi}{4}$, vertical shift: 0
- zeros at 0, π , 2π ; max. at $(\frac{\pi}{2}, 1)$, min. at $(\frac{3\pi}{2}, -1)$
 - zeros at $\frac{\pi}{2}$, $\frac{3\pi}{2}$; max. at (0, 1) and $(2\pi, 1)$, min. at $(\pi, -1)$
 - vertical asymptotes $x = \frac{\pi}{2}$ and $x = \frac{3\pi}{2}$; zeros at 0, π , 2π
 - zeros at $\frac{\pi}{4}$, $\frac{3\pi}{4}$, $\frac{5\pi}{4}$, $\frac{7\pi}{4}$; max. at (0, 1), $(\pi, 1)$, $(2\pi, 1)$; min. at $(\frac{\pi}{2}, -1)$, $(\frac{3\pi}{2}, -1)$
 - no zeros; y-intercept 2; max. at $(\frac{\pi}{2}, 3)$; min. at $(\frac{3\pi}{2}, 1)$
 - zeros at $\frac{\pi}{4}$, $\frac{5\pi}{4}$; y-intercept 1.414; max. at $(\frac{7\pi}{4}, 2)$; min. at $(\frac{3\pi}{4}, -2)$
 - vertical asymptotes $x = 0$, $x = \pi$ and $x = 2\pi$; zeros at $\frac{\pi}{2}$, $\frac{3\pi}{2}$
 - zero at π ; y-intercept -1; max. at $(\pi, 0)$
- $y = 2 \sin x$, $y = 2 \cos(x - \frac{\pi}{2})$
 - $y = \sin(x + \frac{\pi}{4})$, $y = \cos(x - \frac{\pi}{4})$
 - $y = 2x + 1$, $y = \cos 2(x - \frac{\pi}{4}) + 1$
 - $y = -\sin x - 1$, $y = -\cos(x - \frac{\pi}{2}) - 1$
- $x \doteq 6.4$
 - $\theta \doteq 53.1^\circ$
 - $x \doteq 4.1$ cm
 - $\theta \doteq 39.8^\circ$
- $x \doteq 12.1$ cm
 - $\theta \doteq 1.1^\circ$
 - $x \doteq 9.4$ cm
 - $\theta \doteq 48.8^\circ$
- $x \doteq 4.6$ cm
 - $\theta \doteq 53.1^\circ$
 - $x \doteq 8.7$
 - $x \doteq 6.2$ m
- $\angle A = 57^\circ$, $AB \doteq 2.7$ cm, $BC \doteq 4.1$ cm
 - $\angle D = 67^\circ$, $DE \doteq 3.6$ cm, $EF \doteq 3.7$ cm
 - $h \doteq 4.9$ cm, $\angle G \doteq 79.5^\circ$, $\angle I \doteq 57.5^\circ$
- $(x - 8)(x + 8)$
 - $(x + 5)(x + 7)$
 - $(2x - 5)(3x + 1)$
 - $(2x - 5)^2$
 - $2x(x^2 + 2)$
 - $(4x - 1)(2x + 3)$
 - $(x - 7)(x - 2)$
 - $(x - 8)(x + 5)$
- $x = 3$, -7
 - $x = 3$, 8
 - $x = 0$, $\frac{8}{5}$
 - $x = -9$, 6
 - $x = -\frac{1}{2}$, 5
 - $x = \frac{1}{2}$, $\frac{2}{3}$
 - $x = \frac{2}{3}$, $\frac{1}{2}$