

Answer Key 13

5.3: 9, 16, 21, 31, 34, 48, 83

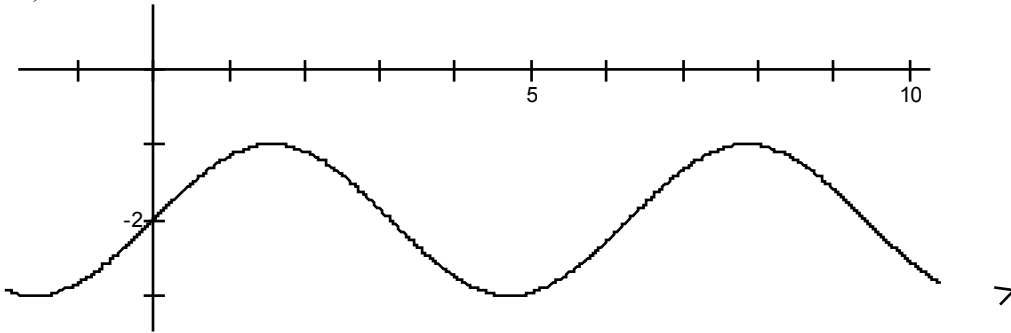
5.4: 5,7,9,18,19,24,49,56

5.5: 3-9, 13, 19, 35

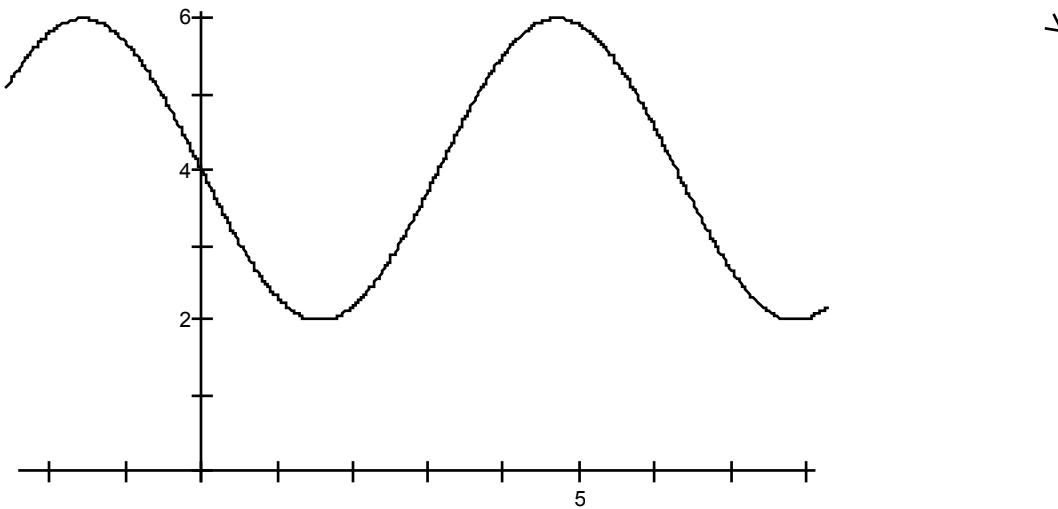
6.4: 5-8, 17, 18, 19, 23, 24, 42

5.3

9) $-2 + \sin x$



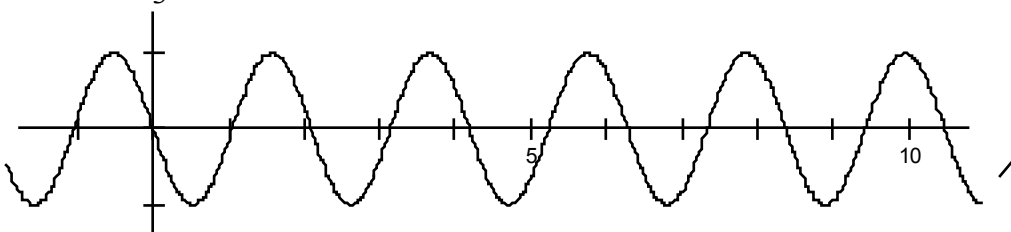
16) $4 - 2 \sin x$



21) $y = -\sin 3x$

Amplitude = 1

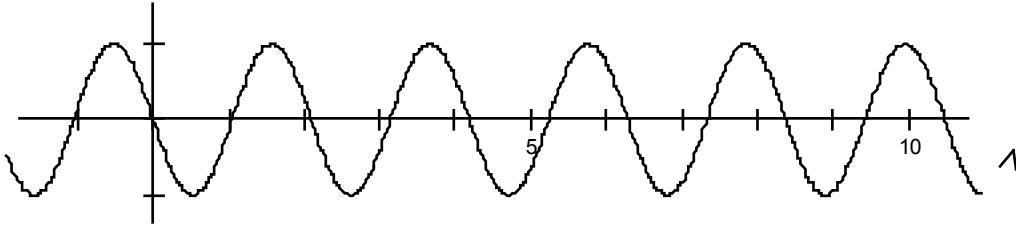
Period = $\frac{2\pi}{3}$



31) $1 + \frac{1}{2} \cos \pi x$

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

Period = 2

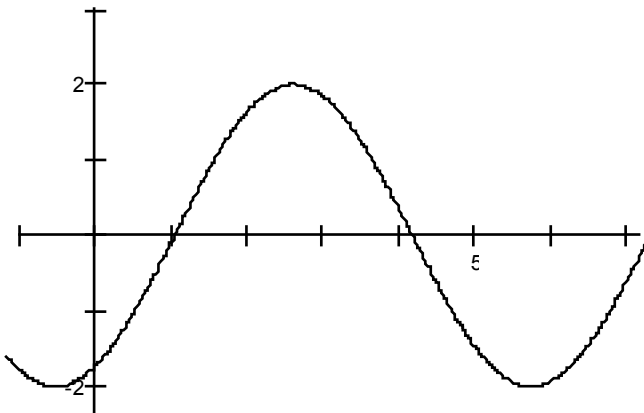


34) $y = 2 \sin\left(x - \frac{\pi}{3}\right)$

Amplitude = 2

Period = 2π

Shift = $\frac{\pi}{3}$



48)

a)

Amplitude = 2

Period = π

Shift = 0

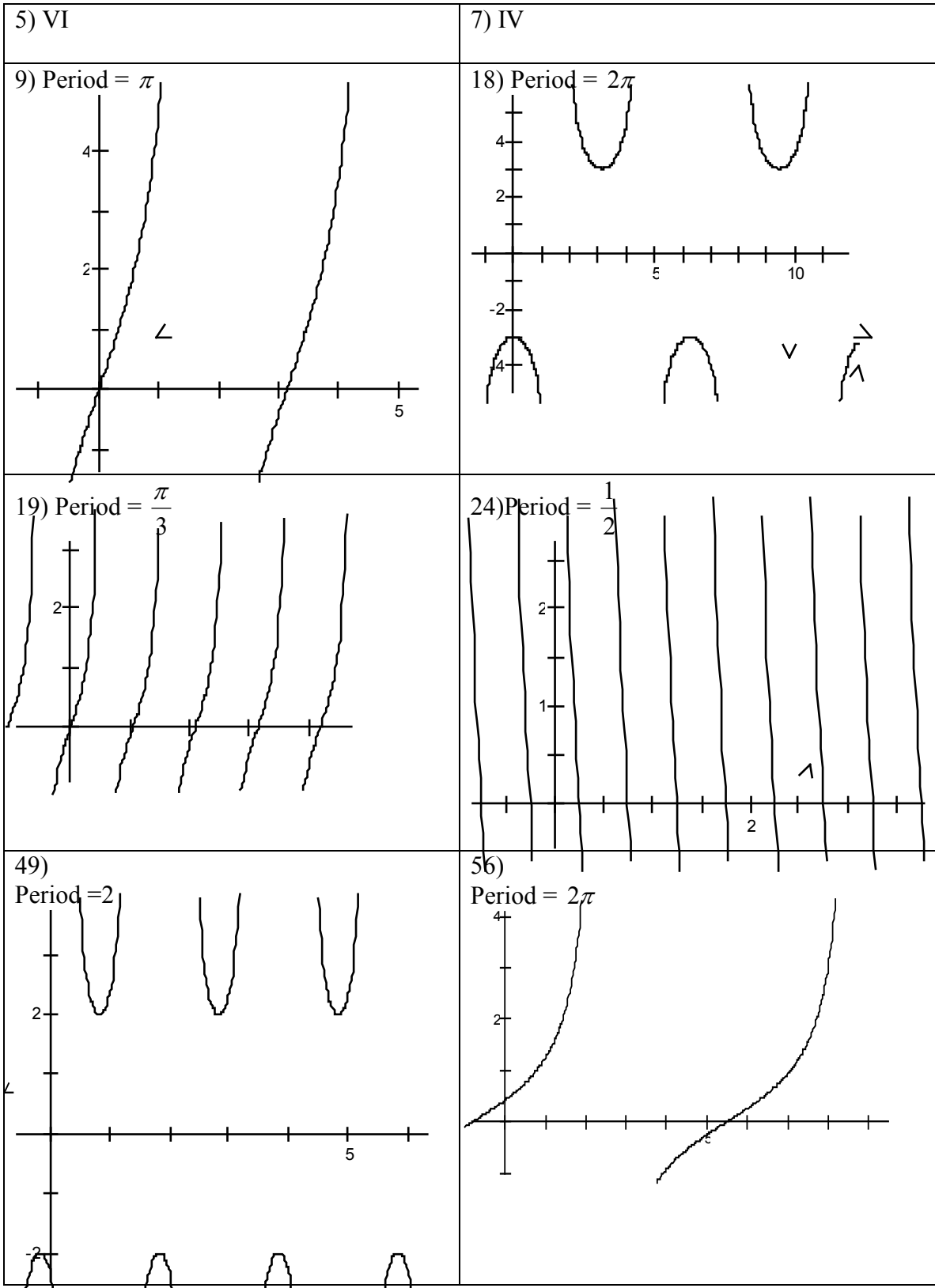
b) $y = 2 \cos(2x)$

83)

Period = $\frac{2\pi}{\pi/10} = 20$

Height = $2 \times \text{Amplitude} = 3 \times 2 = 6$

5.4



5.5

3) a) 90° b) 60° c) not defined	4) a) -90° b) 45° c) undefined
5) a) 180° b) 60° c) 120°	6) a) 45° b) 0° c) 135°
7) a) -45° b) 60° c) 30°	8) a) 0° b) -60° c) -30°
9) a) 120° b) -45° c) 45°	13) 115.37693°
19) 50.99235°	35) $\frac{5\pi}{6}$

6.4

5) a) 90° b) 90° c) 60°	6) a) 0° b) 180° c) 0°
7) a) -45° b) 135° c) -45°	8) a) -60° b) 120° c) -60°
17) $\theta = \tan^{-1}\left(\frac{6}{10}\right) \approx 31.0^\circ$	18) $\theta = \tan^{-1}\left(\frac{7}{18}\right) \approx 21.3^\circ$
19) $\theta = \tan^{-1}\left(\frac{9}{13}\right) \approx 34.7^\circ$	23) $\sin^{-1}(2/3) \approx 41.8^\circ$ $180^\circ - 41.8^\circ = 138.2^\circ$
24) $\cos^{-1}(3/4) \approx 41.4^\circ$ $180^\circ - 41.4^\circ = 138.6^\circ$	42) a) $\theta = \cot^{-1}\left(\frac{s}{50}\right)$ b) 68.2°