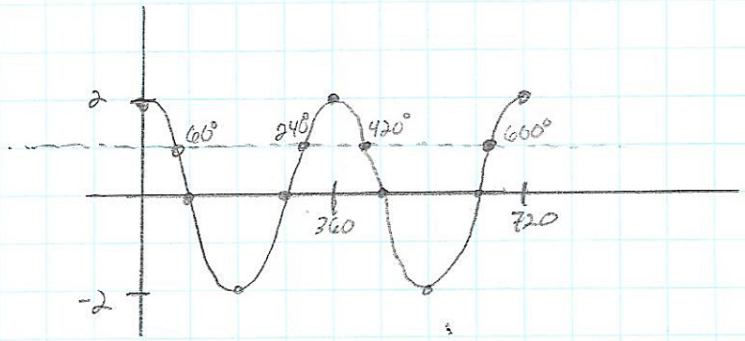
Chapter 8

Trig practice WS #4

1) a)



b) $2\cos\theta = 1$

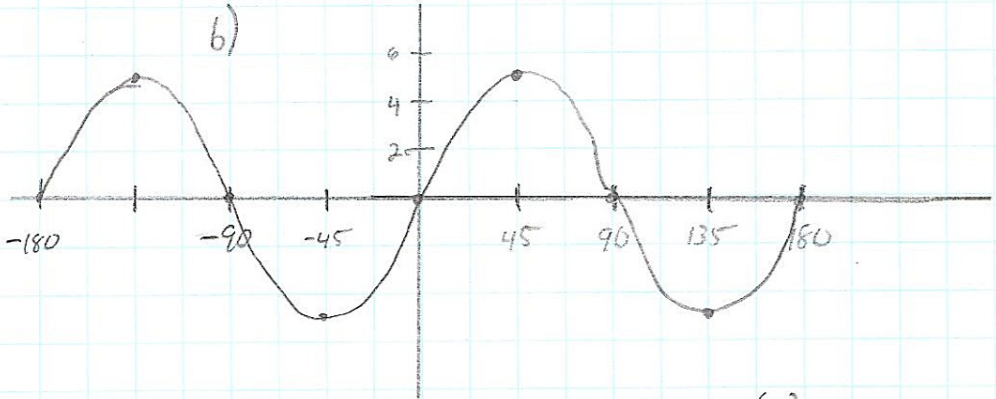
$\cos\theta = \frac{1}{2}$

$\theta = \cos^{-1}\left(\frac{1}{2}\right)$

$\theta = 60°, 240°, 420°, 600$

2) a) $A = 5$ period $= \frac{360°}{2} = 180°$

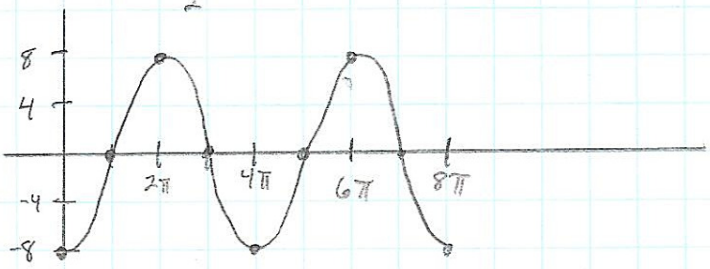
b)



c) No Solution $\sin 2\theta \neq \frac{6.2}{5}$

3) a) period $= \frac{2\pi}{\frac{1}{2}} = 4\pi$

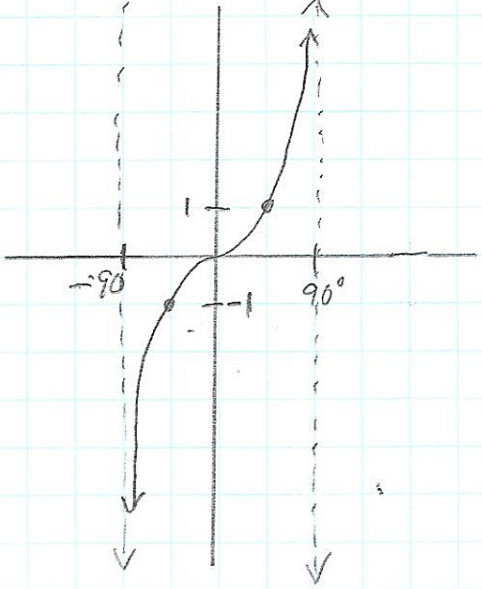
b)



c) $f(2\pi) = 8$

d) $f(x) = 4$, $x = 4.189$

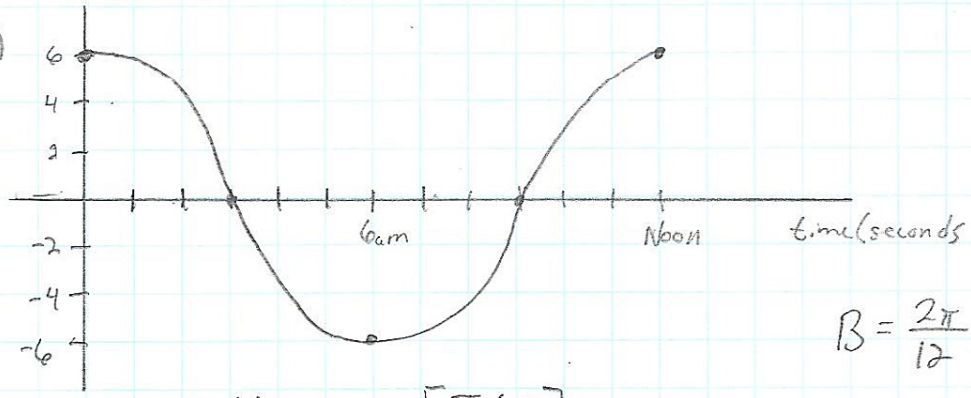
4) a)



b) No Amplitude, but a period of 180°.

c) The period becomes 60°. period = $\frac{180°}{3}$

5)



$B = \frac{2\pi}{12} = \frac{\pi}{6}$

$h(t) = 6\cos\left[\frac{\pi}{6}(x)\right]$

$f(x) = 4$

$x = 1.606\text{am}$ and 10.394am

6) a) $y = 3\sin\left[\frac{\pi}{10}x\right]$ in Radians $\quad B = \frac{2\pi}{20} = \frac{\pi}{10}$

b) $y = -10\cos\left[\frac{\pi}{8}x\right]$ in radians $\quad B = \frac{2\pi}{16}$

7) $\sin\theta = \frac{3}{5}$

$\cos\theta = \frac{4}{5}$

$\frac{1}{\sin\theta} + \frac{1}{\cos\theta}$

$= \frac{1}{\frac{3}{5}} + \frac{1}{\frac{4}{5}}$

$= \frac{5}{3} + \frac{5}{4}$

$= \frac{20}{12} + \frac{15}{12}$

$= \boxed{\frac{35}{12}}$