(b) max = 60 cm

min = 40 cm

max .3 max 3.3

$\text{Ampl} = \frac{60-40}{2} = 10$

$\text{V.S.} = \frac{60+40}{2} = 50$

$\text{Period} = 3.3 - .3 = 3 \text{ sec}$

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

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

$60 = 10\cos\left(\frac{2\pi}{3}(.3) - c\right) + 50$

$10 = 10\cos\left(\frac{.6\pi}{3} - c\right)$

$1 = \cos\left(\frac{.6\pi}{3} - c\right)$

$\cos^{-1}(1) = \frac{.6\pi}{3} - c$

$0 = \frac{.6\pi}{3} - c$

$c = \frac{.6\pi}{3} \approx .63$

$\frac{.2\pi}{1} = \frac{\pi}{5}$

$y = 10\cos\left(\frac{2\pi}{3}t - .63\right) + 50$

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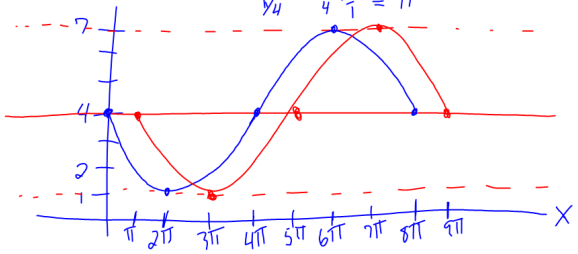
(3) $y = 4 - 3\sin\left(\frac{x}{4} - \frac{\pi}{4}\right)$

Ampl = 3

V.S. = 4

$\text{Per} = \frac{2\pi}{1/4} = 2\pi \cdot \frac{4}{1} = 8\pi$

$\text{P.S.} = \frac{\pi/4}{1/4} = \frac{\pi}{4} \cdot \frac{4}{1} = \pi$



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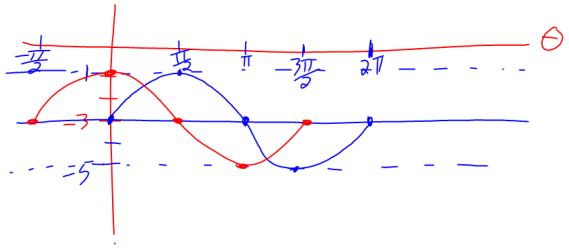
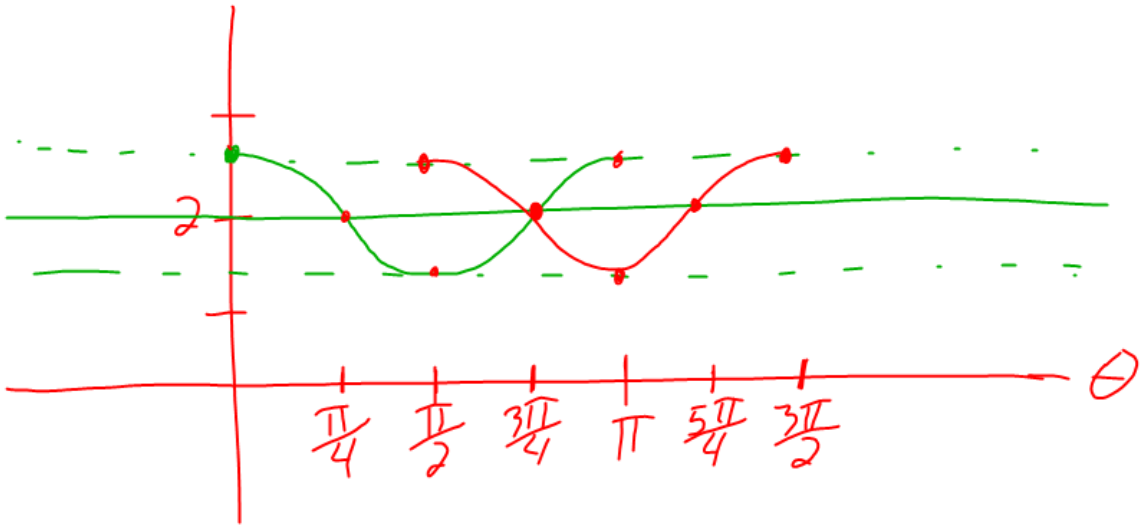
(1)

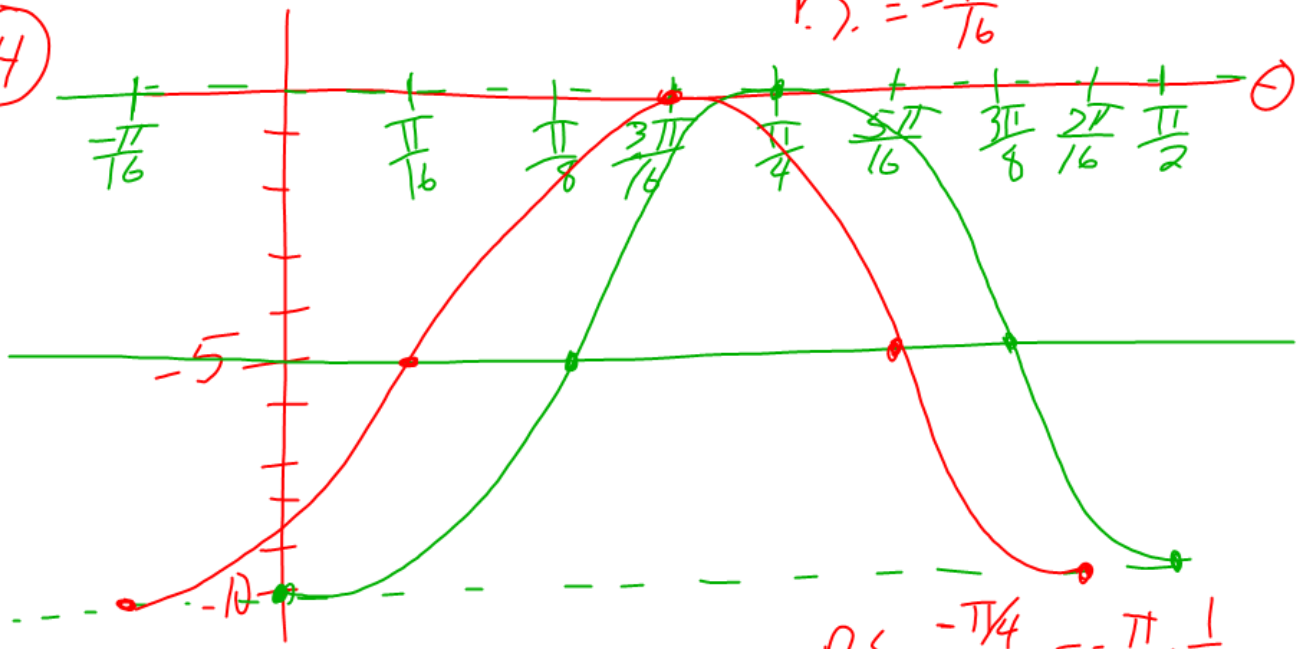


2



4

$P.S. = -\frac{\pi}{16}$



$P.S. = \frac{-\pi/4}{4/1} = -\frac{\pi}{4} \cdot \frac{1}{4}$