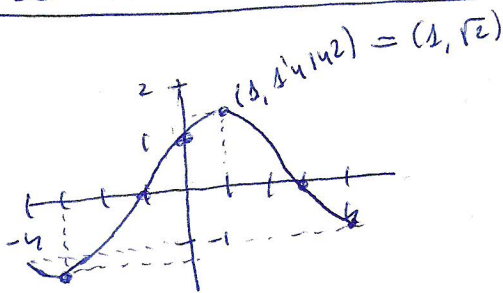


FUNCIONES TRIGONOMÉTRICAS I

①

① Con C.G. (ANGLE \rightarrow RAD)

a)

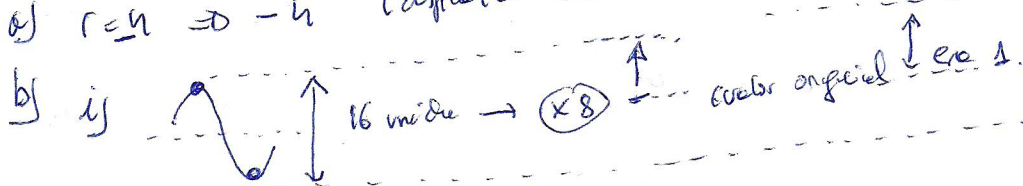


b) dominio de $[-4, -3) \cup (-1, 4]$

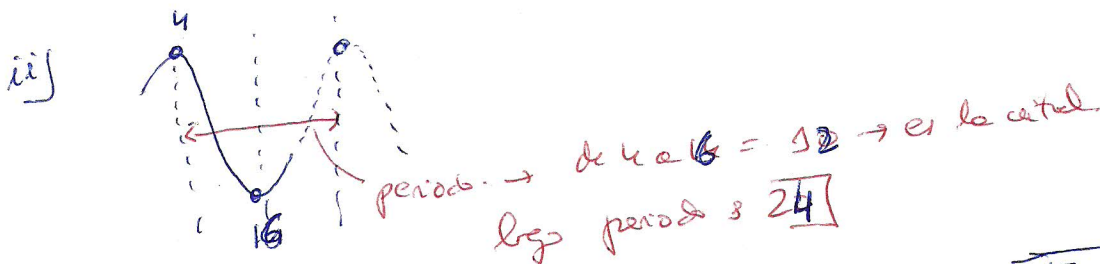
c) $a = \sqrt{2}$ (amplitud 1, multiplicado por $\sqrt{2}$)

$c = 1$ (desplazado a la izquierda 1 unidad)

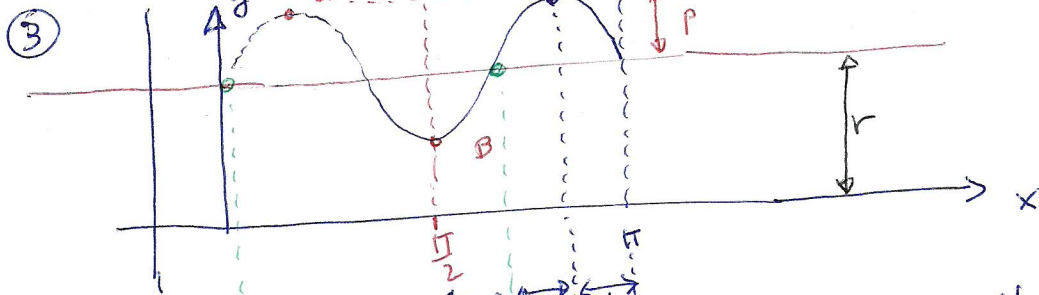
② a) $r = 4 \Rightarrow -4$ (desplazado 4 unidades a la derecha)



$p = 8$



Nuevo periodo: $\frac{2\pi}{9} = 24 \Rightarrow 2\pi = 24 \cdot 9 \Rightarrow \boxed{\frac{\pi}{12} = 9}$



periodo $\frac{\pi}{2} + \frac{\pi}{6} = \frac{3\pi}{6} + \frac{\pi}{6} = \frac{4\pi}{6} \approx 120^\circ$

a) $p = 0.5$

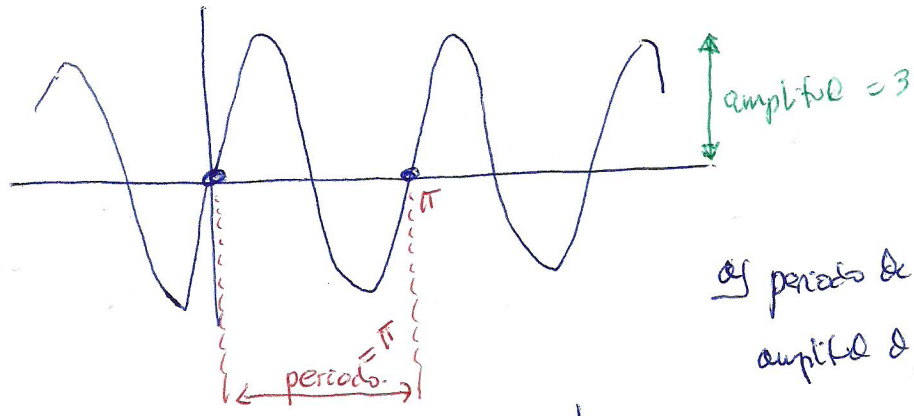
b) $r = 1.5$

c) Nuevo periodo:

$\frac{2\pi}{9} = \frac{4\pi}{6} \Rightarrow 12\pi = 4\pi \cdot 9$

$\boxed{3 = 9}$

4



a) periodo de $f = \pi$
 amplitud de $f = 3$

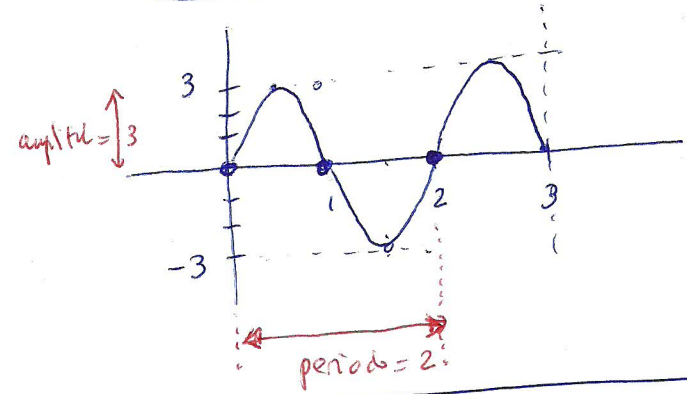
b) $a = 3$

Nuevo periodo $\rightarrow \frac{2\pi}{b} = \pi \rightarrow b = 2$

5) $f(x) = 3 \text{ sen}(\pi x)$

a) amplitud = 3

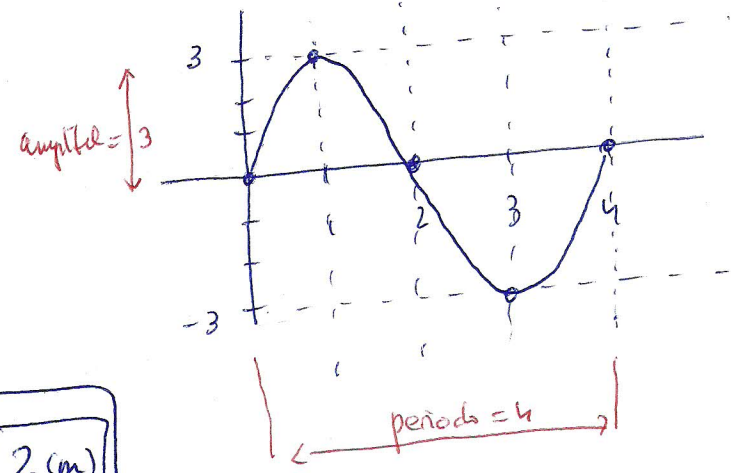
b) periodo $\rightarrow \frac{2\pi}{\pi} = 2$



6) $f(x) = 3 \cdot \text{sen}\left(\frac{\pi}{2}x\right)$

a) amplitud = 3

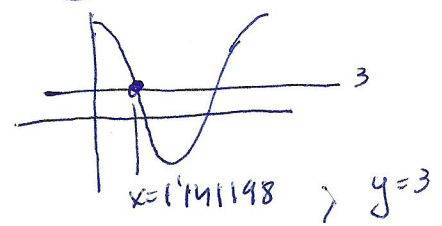
periodo $\rightarrow \frac{2\pi}{\frac{\pi}{2}} = \frac{4\pi}{\pi} = 4$



7) a) $h(t) = -15 \cdot \cos(12t) + 17 = \text{[scribble]} \frac{2}{3} \text{ (m)}$

b) $20 = -15 \cdot \cos(12t) + 17$
 $+3 = +15 \cos(12t) \rightarrow \cos(12t) < 0$

$t = 1.14 \text{ (min)}$



Gráficamente: $T = 5.235987$

Análisis: $\frac{2\pi}{12} = 5.235987 = \frac{5\pi}{3} \text{ min.}$

