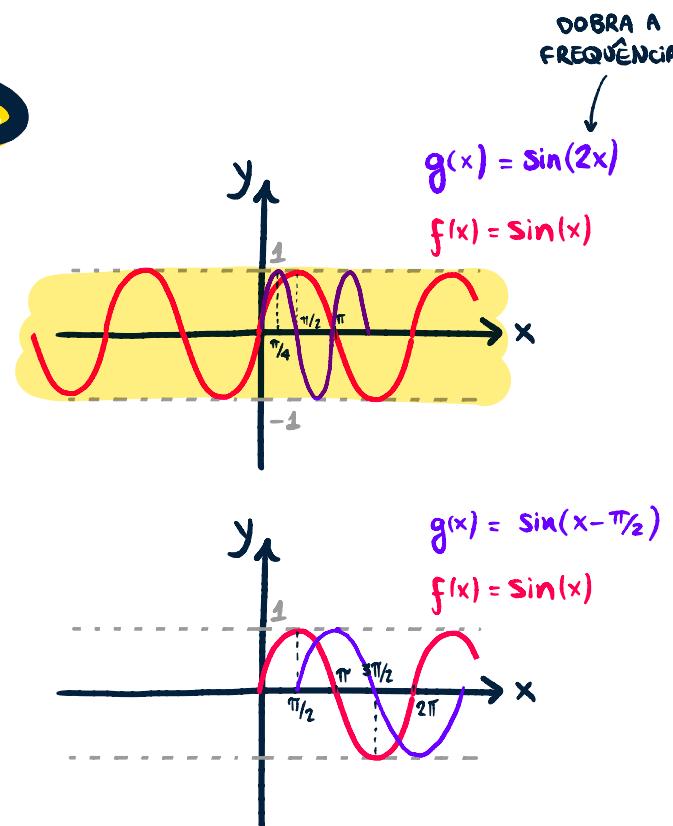
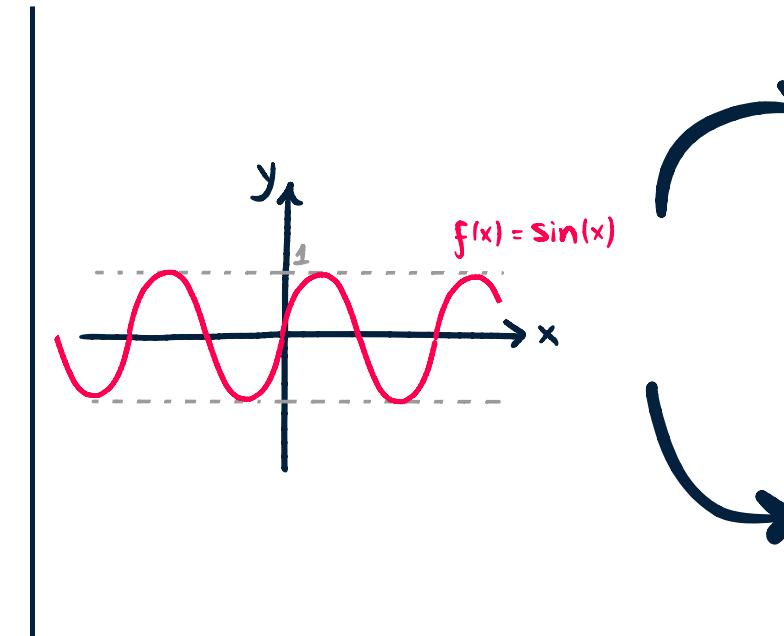
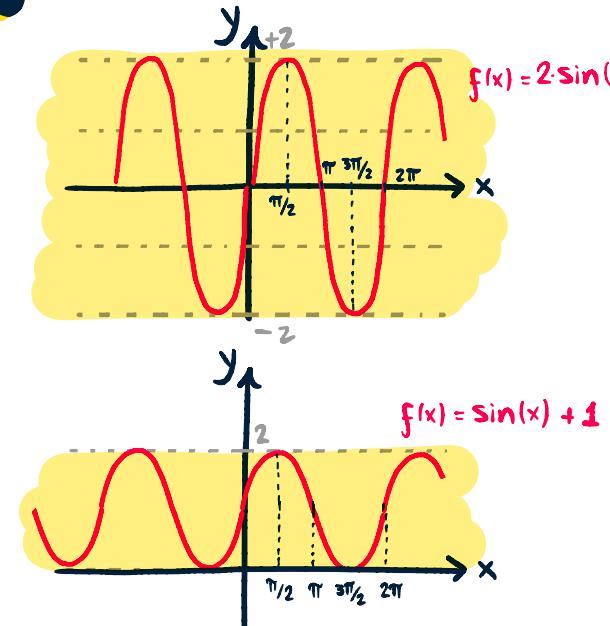
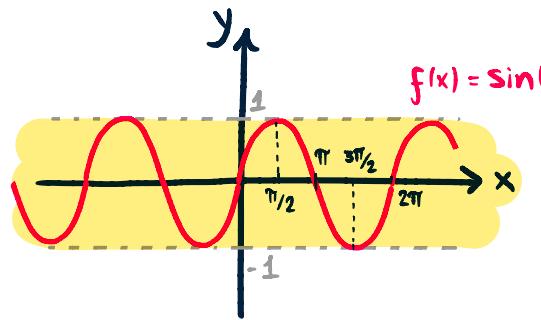
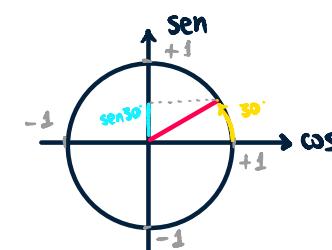


FUNÇÕES TRIGONOMÉTRICAS



$$-1 \leq \sin(x) \leq +1$$

$$-2 \leq 2 \cdot \sin(x) \leq +2$$

$$-1 \leq \sin(x) \leq +1$$

$$-1 \leq \sin(x) \leq +1$$

$$0 \leq \sin(x) + 1 \leq +2$$



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- a $\pi/4$
- b $\pi/2$
- c $-\pi/2$
- d π
- e $-\pi$

$$t_{\min} - t_{\max} \\ \frac{3\pi}{4} - \frac{\pi}{4} = \frac{-2\pi}{4} = -\frac{\pi}{2}$$

$$-1 \leq \sin(2t) \leq +1$$

$$-4815 \leq 4815 \sin(2t) \leq +4815$$

$$-4600 \leq 4815 \sin(2t) + 215 \leq +5030$$

$$-4600 \leq f(t) \leq +5030$$

MÁXIMO
 $\sin(2t) = 1$
 $2t = \pi/2 \Rightarrow t_{\max} = \pi/4$

MÍNIMO
 $\sin(2t) = -1$
 $2t = 3\pi/2 \Rightarrow t_{\min} = 3\pi/4$