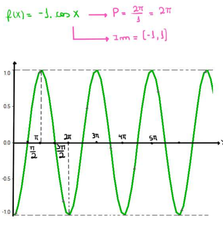
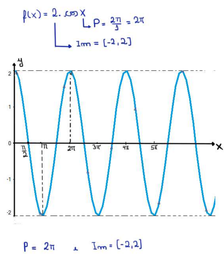
Determine o período e a imagem e faça o gráfico de um período completo das funções abaixo:

1. $f: \mathbb{R} \to \mathbb{R}$ dada por $f(x) = -cos\, x$.



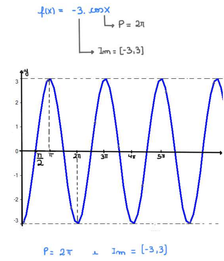
P = 2π ∴ Im = [-1,1]

2. $f: \mathbb{R} \to \mathbb{R}$ dada por $f(x) = 2 \cdot cos\, x$.



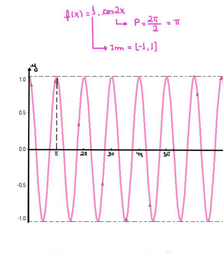
P = 2π ∴ Im = [-2,2]

3. $f: \mathbb{R} \to \mathbb{R}$ dada por $f(x) = -3 \cdot cos\, x$.



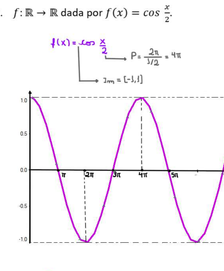
P = 2π ∴ Im = [-3,3]

4. $f: \mathbb{R} \to \mathbb{R}$ dada por $f(x) = cos\, 2x$.



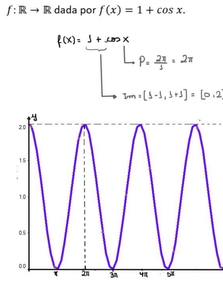
P = π ∴ Im = [-1,1]

5. $f: \mathbb{R} \to \mathbb{R}$ dada por $f(x) = cos\, \frac{x}{2}$.



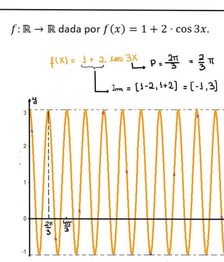
P = 4π ∴ Im = [-1,1]

6. $f: \mathbb{R} \to \mathbb{R}$ dada por $f(x) = 1 + cos\, x$.



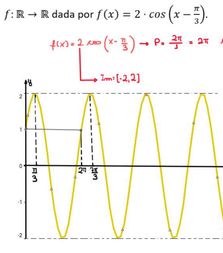
P = 2π ∴ Im = [0,2]

7. $f: \mathbb{R} \to \mathbb{R}$ dada por $f(x) = 1 + 2 \cdot \cos 3x$.



P = 2π/3 ∴ Im = [-1,3]

8. $f: \mathbb{R} \to \mathbb{R}$ dada por $f(x) = 2 \cdot cos\left(x - \frac{\pi}{3}\right)$.



P = 2π ∴ Im = [-2,2]