

Università di Bologna – Campus di Rimini - Corso di laurea in Farmacia

Esercizi MATEMATICA – Docente: Stefano Bordoni – Scheda 2

$$\text{Risolvere: } \sin(x) > \frac{\sqrt{2}}{2}, \quad \sin(x) \leq \frac{\sqrt{2}}{2}, \quad \sin(x) \geq -\frac{\sqrt{2}}{2}, \quad \sin(x) < -\frac{\sqrt{2}}{2}$$

$$\text{Risolvere: } \cos(x) > \frac{\sqrt{3}}{2}, \quad \cos(x) \leq \frac{\sqrt{3}}{2}, \quad \cos(x) \geq -\frac{\sqrt{3}}{2}, \quad \cos(x) < -\frac{\sqrt{3}}{2}$$

$$\text{Risolvere: } \cot(x) > \frac{\sqrt{3}}{3}, \quad \cot(x) \leq \frac{\sqrt{3}}{3}, \quad \cot(x) \geq -\frac{\sqrt{3}}{3}, \quad \cot(x) < -\frac{\sqrt{3}}{3}$$

$$\text{Risolvere: } \operatorname{tg}(x) > 1, \quad \operatorname{tg}(x) \leq \frac{\sqrt{3}}{3}, \quad \operatorname{tg}(x) \geq -1, \quad \operatorname{tg}(x) < -\frac{\sqrt{3}}{3}$$

Determinare dominio, grafico e codominio delle seguenti funzioni (studio globale):

$$y = (x-1)^2, \quad y = (x+1)^2, \quad y = x^2 - 1, \quad y = x^2 + 1, \quad y = (x-1)^2 - 1, \quad y = (x+1)^2 - 1, \quad y = (x-1)^2 + 1, \quad y = (x+1)^2 + 1$$

$$y = \frac{1}{x-1}, \quad y = \frac{1}{x+1}, \quad y = \frac{1}{x} - 1, \quad y = \frac{1}{x} + 1, \quad y = \frac{1}{x+1} - 1, \quad y = \frac{1}{x-1} - 1, \quad y = \frac{1}{x+1} + 1, \quad y = \frac{1}{x-1} + 1$$

$$y = |x+1|, \quad y = |x-1|, \quad y = -|x|, \quad y = -|x+1|, \quad y = -|x-1|, \quad y = -|x| + 1$$

$$y = \sqrt{x-1}, \quad y = \sqrt{x+1}, \quad y = \sqrt{x} - 1, \quad y = \sqrt{x} + 1, \quad y = \sqrt{x-1} - 1, \quad y = \sqrt{x+1} - 1, \quad y = \sqrt{x-1} + 1, \quad y = \sqrt{x+1} + 1$$

$$y = \ln(x+1), \quad y = \ln(-x), \quad y = -\ln(x), \quad y = -\ln(-x), \quad y = -\ln(x+1), \quad y = \ln|x|, \quad y = |\ln(x)|, \quad y = |\ln(|x|)|$$

$$y = \sin(x) + 1, \quad y = \sin(x) - 1, \quad y = -\sin(x), \quad y = -\sin(x) + 1, \quad y = \sin\left(x - \frac{\pi}{2}\right), \quad y = \sin\left(x - \frac{\pi}{2}\right) + 1$$

$$y = \ln|x|, \quad y = \ln|-x|, \quad y = |\ln(x)|, \quad y = -|\ln(x)|, \quad y = |\ln(-x)|, \quad y = |\ln(x+1)|, \quad y = -|\ln(x+1)|$$

$$y = e^{|x|}, \quad y = e^{-|x|}, \quad y = e^{-x}, \quad y = e^{-|x|}, \quad y = -e^{-|x|}, \quad y = e^{|x|} - 1, \quad y = e^{-|x|} - 1$$

Determinare dominio, grafico e codominio delle seguenti funzioni con valore assoluto:

$$y = 2|x| - x, \quad y = 2x - |x|, \quad y = \frac{2|x| - x}{x}, \quad y = \frac{2x - |x|}{x}, \quad y = \frac{2|x| - x}{|x|}, \quad y = \frac{2x - |x|}{|x|}$$