# Discontinuità eliminabili

## Periodo 3 - UdA 4

Rappresentare graficamente le seguenti funzioni

[1] $f(x) = \frac{-3x^3-6x^2}{x^2-3x}$

[2] $f(x) = \frac{-2x^2+2x+12}{-2x+6}$

[3] $f(x) = \frac{-x^2-5x-6}{x^2-1}$

[4] $f(x) = \frac{-2x^2-6x-4}{-x^2-4x-4}$

[5] $f(x) = \frac{-x^2-3x}{-x^2-x}$

[6] $f(x) = \frac{-2x^2-6x-4}{-x^2+1}$

[7] $f(x) = \frac{-x^3+x^2}{-x^2+3x-2}$

[8] $f(x) = \frac{x^2+x}{-x^4-3x^3}$

[9] $f(x) = \frac{x^2+4x+4}{-x^2-x+2}$

# SOLUZIONI

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1. $f(-2) = 0 \quad \lim_{x \to 0} f(x) = 0 \quad \lim_{x \to 3^{\mp}} f(x) = \pm\infty \quad \lim_{x \to \mp\infty} f(x) = \pm\infty$

2. $f(-2) = 0 \quad f(0) = 2 \quad \lim_{x \to 3} f(x) = 5 \quad \lim_{x \to \pm\infty} f(x) = \pm\infty$

3. $f(-3) = 0 \quad f(-2) = 0 \quad \lim_{x \to -1^{\pm}} f(x) = \pm\infty \quad f(0) = 6 \quad \lim_{x \to 1^{\mp}} f(x) = \pm\infty \quad \lim_{x \to \infty} f(x) = -1$

4. $\lim_{x \to -2^{\mp}} f(x) = \pm\infty \quad f(-1) = 0 \quad f(0) = 1 \quad \lim_{x \to \infty} f(x) = 2$

5. $f(-3) = 0 \quad \lim_{x \to -1^{\pm}} f(x) = \pm\infty \quad \lim_{x \to 0} f(x) = 3 \quad \lim_{x \to \infty} f(x) = 1$

6. $f(-2) = 0 \quad \lim_{x \to -1} f(x) = -1 \quad f(0) = -4 \quad \lim_{x \to 1^{\pm}} f(x) = \pm\infty \quad \lim_{x \to \infty} f(x) = 2$

7. $f(0) = 0 \quad \lim_{x \to 1} f(x) = -1 \quad \lim_{x \to 2^{\pm}} f(x) = \pm\infty \quad \lim_{x \to \pm\infty} f(x) = \pm\infty$

8. $\lim_{x \to -3^{\pm}} f(x) = \pm\infty \quad f(-1) = 0 \quad \lim_{x \to 0} f(x) = -\infty \quad \lim_{x \to \infty} f(x) = 0$

9. $\lim_{x \to -2} f(x) = 0 \quad f(0) = 2 \quad \lim_{x \to 1^{\mp}} f(x) = \pm\infty \quad \lim_{x \to \infty} f(x) = -1$