

DETERMINARE IL DOMINIO E GLI EVENTUALI ASINTOTI
DELLE SEGUENTI FUNZIONI:

$$\textcircled{1} f(x) = \frac{4x}{x+1}$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, -1) \cup (-1, +\infty) \\ \text{A.V. } \rightarrow x = -1 \\ \text{A.Oz. } \rightarrow y = 4 \end{array} \right.$$

$$\textcircled{2} f(x) = \log \frac{x-3}{x}$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, 0) \cup (3, +\infty) \\ \text{A.V. sim. } \rightarrow x = 0 \\ \text{A.V. dx } \rightarrow x = 3 \\ \text{A.Oz. } \rightarrow y = 0 \end{array} \right.$$

$$\textcircled{3} f(x) = \frac{x-1}{3^{x+1}}$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, -1) \cup (-1, +\infty) \\ \text{A.V. } \rightarrow x = -1 \\ \text{A.Oz. } \rightarrow y = 3 \end{array} \right.$$

$$\textcircled{4} f(x) = \sqrt{\frac{x+3}{x+1}}$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, -3] \cup (-1, +\infty) \\ \text{A.V. dx } \rightarrow x = -1 \\ \text{A.Oz. } \rightarrow y = 1 \end{array} \right.$$

$$\textcircled{5} f(x) = \frac{x^2 - 3x + 1}{2x - 5}$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, \frac{5}{2}) \cup (\frac{5}{2}, +\infty) \\ \text{A.V. } \rightarrow x = \frac{5}{2} \\ \text{A.Oz. } \rightarrow y = \frac{1}{2}x - \frac{1}{4} \end{array} \right.$$

$$\textcircled{6} f(x) = \frac{x^3 - 2x^2 + 1}{x^2 - 4}$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, -2) \cup (-2, 2) \cup (2, +\infty) \\ \text{A.V. } \rightarrow x = -2 \\ \text{A.V. } \rightarrow x = +2 \\ \text{A.Obt. } \rightarrow y = x - 2 \end{array} \right]$$

$$\textcircled{7} f(x) = \frac{x}{9 - 3x}$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, 3) \cup (3, +\infty) \\ \text{A.V. } \rightarrow x = 3 \\ \text{A.Obt. } \rightarrow y = -\frac{1}{3} \end{array} \right]$$

$$\textcircled{8} f(x) = e^{x^2 + 1}$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, +\infty) \\ \text{A.V. } \rightarrow \text{No} \\ \text{A.Obt. } \rightarrow \text{No} \\ \text{A.Obt. } \rightarrow \text{No} \end{array} \right]$$

$$\textcircled{9} f(x) = \log(x^2 + 1)$$

$$R. \left[\begin{array}{l} \text{Dominio } (-\infty, +\infty) \\ \text{A.V. } \rightarrow \text{No} \\ \text{A.O. } \rightarrow \text{No} \\ \text{A.Obt. } \rightarrow \text{No} \end{array} \right]$$