

EX 3.5

c) $f(x) = \frac{x^2 + 2}{x}$

ED(f) = \mathbb{R}^* (v.i. : 0)

AV/hou $\lim_{x \rightarrow 0} \frac{x^2 + 2}{x} = \frac{2}{0} = \infty \Rightarrow$ $x=0$ est une AV

AH/AG : AO car $\deg(N) = \deg(D) + 1$
 $2 = 1 + 1$

$$\begin{array}{r} x^2 + 2 \\ - x^2 \\ \hline 2 \end{array} \quad \left| \begin{array}{r} x \\ x \\ \hline \end{array} \right. \quad \left(\Rightarrow f(x) = x + \frac{2}{x} \right)$$

\Rightarrow $y=x$ est une AO

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

$$\underline{ED(f)} = \mathbb{R} - \{1\} \quad (\text{v.i. : 1})$$

$$\underline{AV/hou} : \lim_{x \rightarrow 1} f(x) = \frac{3-4+2}{0} = \frac{1}{0} = \infty \Rightarrow \underline{x=1 \text{ AV}}$$

$$\underline{AH/AO} \quad AO \text{ car } \deg(N) = \deg(D) + 1$$

$$2 = 1 + 1$$

$$\begin{array}{r} 3x^2 - 4x + 2 \\ - 3x^2 + 3x \\ \hline -x + 2 \\ +x + 1 \\ \hline 1 \end{array}$$

$$\begin{array}{r} x-1 \\ \hline 3x-1 \end{array}$$

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

$$\Rightarrow \underline{y = 3x - 1 \text{ est une AO}}$$