ECP1

Devoir 10

Exercise 1

Let f be the function defined on $\mathbb{R}$ by : $f(x) = x^2 - 6x + 1$.

1. Find the limits of the function f at $-\infty$ and at $+\infty$.

2. Calculate $f'(x)$, the derivative of f.

3. Study the sign of $f'(x)$ on $\mathbb{R}$ and then, draw up the table of variation of f on $\mathbb{R}$.

Exercise 2

Let f be the function defined on $\mathbb{R}$ by : $f(x) = x^3 + 3x^2 - 9x$.

1. Find the limits of the function f at $-\infty$ and at $+\infty$.

2. Calculate $f'(x)$, the derivative of f.

3. Study the sign of $f'(x)$ on $\mathbb{R}$ and then, draw up the table of variation of f on $\mathbb{R}$.

Support : $\sqrt{121} = 11$, $\sqrt{144} = 12$, $\sqrt{169} = 13$, $\sqrt{196} = 14$.