

Answer on Question #38321 - Math - Other

$$f(x) = x^3 - x - 1$$

Let's take $a = 0$ and $b = 2$. Then

$$f(a) = f(0) = 0^3 - 0 - 1 = -1 < 0$$

$$f(b) = f(2) = 2^3 - 2 - 1 = 5 > 0$$

Thus $f(a)$ and $f(b)$ are of opposite sign.