2 A student is searching for a solution to the equation $f(x) = 0$

He correctly evaluates

$$f(-1) = -1 \text{ and } f(1) = 1$$

and concludes that there must be a root between -1 and 1 due to the change of sign.

Select the function $f(x)$ for which the conclusion is **incorrect**.

Circle your answer.

[1 mark]

$f(x) = \frac{1}{x}$ $\quad$ $f(x) = x$ $\quad$ $f(x) = x^3$ $\quad$ $f(x) = \frac{2x+1}{x+2}$