

## Starter

solve  $x^3 + 2x^2 - 4x = x + 6$

The values of  $x$  for which  $f(x) = 0$  are the real zeros of the function and the  $x$ -intercepts of its graph

zeros are  $\{-3, -1, 2\}$

replace 0 with  $f(x)$

$$f(x) = x^3 + 2x^2 - 5x - 6$$

graph the function  $f(x)$

$$f(x) = x^3 + 2x^2 - 5x - 6$$

simplify

$$x^3 + 2x^2 - 5x - 6 = 0$$

make the equation  $= 0$

$$x^3 + 2x^2 - 4x - x - 6 = 0$$

