

1. Plot these points in the xy -plane:

A $(0,0)$ B $(5,0)$ C $(0,-4)$ D $(-3,5)$

2. Without using a calculator, sketch a graph of each of these in the xy -plane:

A $y = x$ B $y = 3$ C $x = 3$ D $y = x^2$ E $y = \frac{1}{x}$

3. Consider the function

$$f(x) = \begin{cases} 2x+1 & x < 1 \\ x^2 - 1 & x \geq 1 \end{cases}$$

a. Evaluate $f(0)$, $f(1)$ and $f(2)$.

b. Sketch a graph of $y = f(x)$.

4. Let $f(x) = \sqrt{4x-3}$.

a. Evaluate $f(7)$, $f(1)$, $f(10)$ and $f(0)$.

b. Find the domain of $f(x)$ and the range of $f(x)$.

c. Find $f(x+h)$.