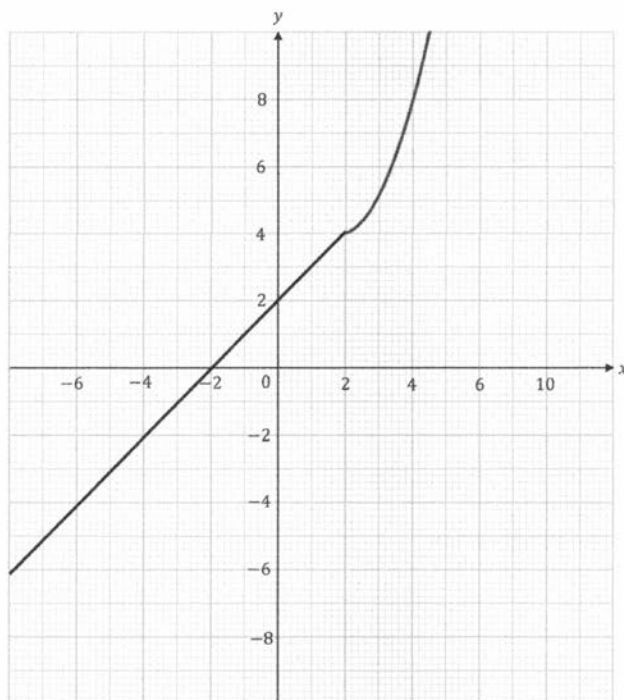


2(a)

B1 $x + 2$ plotted correctlyB1 General shape and positioning of $(x - 2)^2 + 4$ correctB1 Intersection at (2,4), must clearly be the minimum point of $(x - 2)^2 + 4$

[3]

2(b)

Process to find inverse of $f_1(x) = x + 2$

$$f_1^{-1}(x) = x - 2$$

Begin process to find inverse of $f_2(x) = (x - 2)^2 + 4$

Must show evidence of considering both roots

$$\text{e.g. } x - 2 = \pm\sqrt{x - 4}$$

As domain is $x > 2$ RHS is +ve

$$x - 2 = \sqrt{x - 4}$$

$$f_2^{-1}(x) = 2 + \sqrt{x - 4}$$

Fully correct inverse including domain

$$f^{-1}(x) = \begin{cases} x - 2 & x \leq 4 \\ 2 + \sqrt{x - 4} & x > 4 \end{cases}$$

M1

A1

M1

M1

A1

A1

[6]

[9 marks]