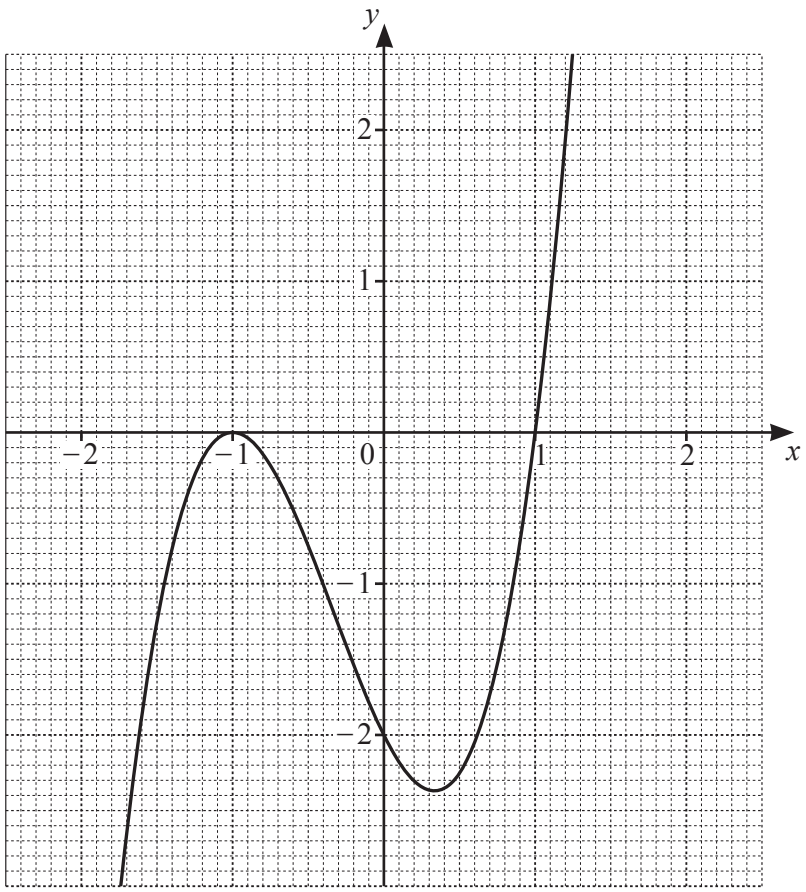
3



The diagram shows the graph of $y = \mathrm{f}(x)$, where $\mathrm{f}(x) = a(x+b)^2(x+c)$ and a, b and c are integers.

(a) Find the value of each of a, b and c. [2]

(b) Hence solve the inequality $\mathrm{f}(x) \leqslant -1$. [3]

4 The curve $\frac{4}{x^2}+\frac{5}{4y^2}=1$ and the line $x+2y=0$ intersect at two points. Find the exact distance between these points. [6]