1.   **In this question you must show all stages of your working.**

Solutions relying entirely on calculator technology are not acceptable.
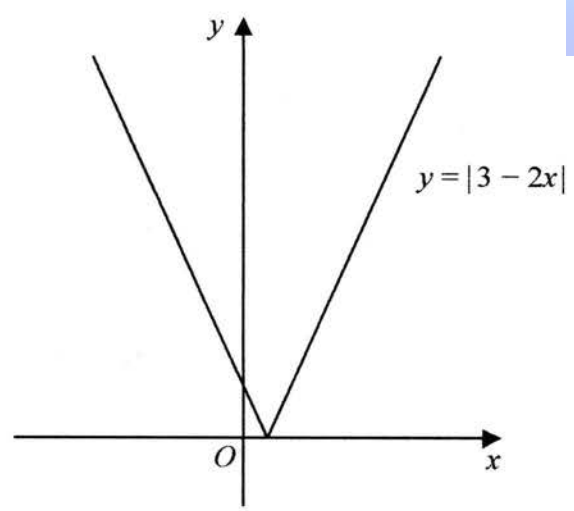
Figure 1

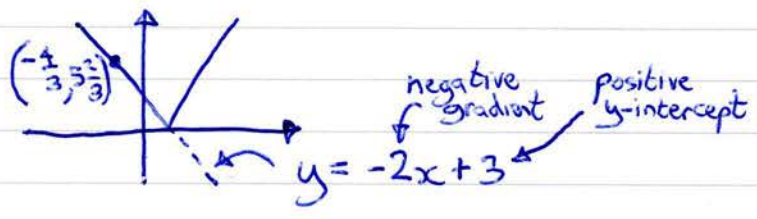Figure 1 shows a sketch of the graph with equation $y = |3 - 2x|$

Solve

$$|3 - 2x| = 7 + x$$

(4)

$$3 - 2x = 7 + x \qquad \text{(1 mark)}$$

$$\Rightarrow x = -\frac{4}{3} \qquad \text{(1 mark)}$$

check y positive
$$y = 7 + \left(-\frac{4}{3}\right) = 5\frac{2}{3}$$

$\left(-\frac{4}{3}, 5\frac{2}{3}\right)$

negative gradient   positive y-intercept

$y = -2x + 3$

$$2x - 3 = 7 + x \qquad \text{(1 mark)}$$

$$\Rightarrow x = 10 \qquad \text{(1 mark)}$$

check y positive
$$y = 7 + 10 = 17$$

$(10, 17)$

positive gradient

$y = 2x - 3$ negative y-intercept