Question 2.

a) $y = x^2 + 3x$

$y' = 2x + 3$ $\quad (x, y)$

$y = 2 \times 1 + 3$

$y = 5$

$y = 2x + 3$

$4 = 2x + 3$

$2x = 1$

$x = \frac{1}{2}$

$\left(\frac{1}{2}, 5\right)$

b) i) $\frac{y - y'}{x - x'} = \frac{5 - 3}{-2 - 4}$

$= \frac{2}{-6}$ $\quad m = -\frac{1}{3}$

$y - y' = m(x - x')$

$y - 3 = -\frac{1}{3}(x - 4)$

$y - 3 = -\frac{1}{3}x + 1\frac{1}{3}$

ii)