See Ch1.6
For a reminder on the equation of a straight line.

When lines with gradient m_1 and m_2 are **perpendicular** to each other, $m_1 \times m_2 = -1$

Key point

$m_1 = -\dfrac{1}{m_2}$ for perpendicular lines.

The **tangent** to the curve $y = f(x)$, which touches the curve at the point $(x, f(x))$, has the same gradient as the curve at that point, giving $m_T = f'(x)$

The **normal** to the curve $y = f(x)$, which passes through the point $(x, f(x))$, is perpendicular to the tangent at that point.

giving $m_N = -\dfrac{1}{m_T} = -\dfrac{1}{f'(x)}$

A line with gradient m passing through the point (a, b) has equation $(y - b) = m(x - a)$