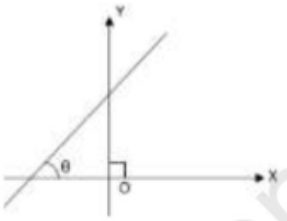
Formulas

For points A(x_1, y_1) and B(x_2, y_2)

Mid-Point of A and B $(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2})$

Distance between A and B $\sqrt{(y_2 - y_1)^2 + (x_2 - x_1)^2}$

Gradient m= $\frac{y_2-y_1}{x_2-x_1}$



Angle between line and x-axis $|m| = tan\theta$

[where $|m|$ means magnitude of m eg. $|-3| = 3$]

Equation of straight line $y = mx + c$ **or** $y - y_1 = m(x - x_1)$

Parallel Lines $m_1 = m_2$ **Perpendicular Lines** $m_1 \times m_2 = -1$

Collinear points

$m_{pq}=m_{qr}=m_{pr}$