Ex 18 Straight Line

1. Calculate the gradients of the lines joining the following points:

   (a) A(2, 3) and B(7, 9) (b) C(-3, 5) and D(7, 0)

2. (a) Find the gradient and y-intercept for these straight lines:
   (i) $6y - 3x = 7$ (ii) $9 - 4x + y = 0$ (iii) $5 = 2x - 8y$

   (b) Write down the equation of a line parallel to $2x + y = 6$, passing through:
   (i) (5, 6) (ii) (0, 3)

3. Use the equation $y - b = m(x - a)$ to find the equation of the line through the given point, with the given gradient.

   (a) (4, 6), $m = 2$ (b) (3, -1), $m = -\frac{2}{5}$

4. Find the equation of the line connecting the points:

   (a) (3, 3) and (4, 6) (b) (-2, -5) and (-3, 7) (c) (0, 5) and (-4, -5)