WEEK 4 PRACTICE QUESTIONS

1. Answer each of the following questions, showing all working.

   (a) Find the distance between the points $(-3, 3)$ and $(2, 4)$.

   (b) Find the gradient and y-intercept of the line $y + x - 1 = -1$

   (c) Find the equation of the line with gradient $m = -3$ passing through the point $(0, 4)$.

   (d) Find the equation of the straight line passing through the points $(2, -4)$ and $(-4, 0)$.

   (e) Find the equation of the line parallel to $y - x + 3 = 2$ and passing through the point $(-1, 3)$.

   (f) Find the equation of the line perpendicular to $2y + 3 = 0$ and passing through the point $(-5, 5)$.

2. Answer each of the following questions, showing all working.

   (a) Find the distance between the points $(-4, 4)$ and $(-3, 0)$.

   (b) Find the gradient and y-intercept of the line $-3y + x - 2 = 3$

   (c) Find the equation of the line with gradient $m = 5$ passing through the point $(0, -5)$.

   (d) Find the equation of the straight line passing through the points $(-1, 0)$ and $(-4, -2)$.

   (e) Find the equation of the line parallel to $-3y + 2 = -3$ and passing through the point $(4, 1)$.

   (f) Find the equation of the line perpendicular to $-2y + 3x = -1$ and passing through the point $(0, 3)$.

3. Answer each of the following questions, showing all working.

   (a) Find the distance between the points $(1, 1)$ and $(-3, 3)$.

   (b) Find the gradient and y-intercept of the line $3y - 2 = 2$

   (c) Find the equation of the line with gradient $m = -1$ passing through the point $(-1, 4)$.

   (d) Find the equation of the straight line passing through the points $(0, 3)$ and $(0, 2)$.

   (e) Find the equation of the line parallel to $-y = -3$ and passing through the point $(-1, -2)$.

   (f) Find the equation of the line perpendicular to $3y + 2x + 1 = 1$ and passing through the point $(1, -1)$.