

Elementary Mathematics 6101

Exercise Sheet 3

20 October 2010

Please answer all questions on the sheet.

1. Compute the gradients between the following two points
 - i) $(1, 2)$ and $(4, 6)$
 - ii) $(1, 0)$ and $(-1, 2)$
 - iii) $(2, 3)$ and $(0, 0)$
2. Construct the straight line for each of the points in question 1
3. Construct the normal of the line $4x - 3y + 2 = 0$ going through the point $(1, 1)$
4. Compute the point of intersection of the following lines:
 - i) $x + y = 2$ and $2x - y = 1$
 - ii) $2y + x = -1$ and $y - x = 2$
5. Given the line $2x - y = 1$, compute the shortest distance from the line is from the following point.
 - i) $(2, 1)$
 - ii) $(0, 0)$