S4 National 5 Homework – Due Tuesday 4th September

Complete this in your jotters.

1) Write down the gradient and y intercept of the following straight lines.
   a) $y = 3x + 4$ b) $y = -7x + 3$ c) $y = -0.5x$

2) Solve the equations simultaneously.

$$3x + y = 11$$

$$2x + y = 8$$

3) Solve the equations simultaneously.

$$4x - 3y = -5$$

$$2x - 2y = -6$$

4) Change the subject of the equation to w in each case.
   a) $y = 2w + 5$ b) $3\sqrt{w} - \pi = t$ c) $4wt - 3w = 1$

5) By fining the roots, axis of symmetry, turning point and y intercept sketch the following graphs.
   a) $y = x^2 + 8x + 12$ b) $y = x^2 + 2x - 15$

6) Find the equation of the parabola given the following roots.
   a) (3, 0) and (1, 0) b) (6, 0) and (-5, 0)

7) Find the equation of the parabola given the following turning points.
   a) (6, 9) b) (-9, -5) c) (-4, -0.5)