**C1 Chapter 6 : CO-ORDINATE GEOMETRY (AS MATHS)**

**Name: ………………………………..**

**Score:** $\frac{}{35}$ **Percentage: Grade: Target grade:**

1. *A* is the point (2, 7) and *B* is the point (-1, -2)
2. Find the equation of the line through A parallel to the line $y=4x-5$ giving your answer in the form *y = mx + c*. [3]
3. Calculate the length of *AB*, giving your answers in simplified surd form. [3]
4. Find the equation of the line which passes through the midpoint of *AB* and which is perpendicular to *AB*. Give your answer in the form *ax + by + c = 0*, where *a*, *b* and *c* are integers.

[6]

[January 2007 Q9]

2. The points *A* and *B* have co-ordinates (-5, 2) and (3, 1) respectively.

1. Find the equation of the line *AB*, giving your answer in the form *ax + by + c = 0*. [3]
2. Find the co-ordinates of the mid-point of *AB*. [2]

The point *C* has co-ordinates (-3, 4).

1. Calculate the length of *AC*, giving your answer in simplified surd form. [3]
2. Determine whether the line *AC* is perpendicular to the line *BC*, showing all your working. [4]

[January 2008 Q9]

1. The points *A, B* and *C* have co-ordinates (5, 1), (*p*, 7) and (8, 2) respectively.
2. Given that the distance between the points *A* and *B* is twice the distance between points *A* and *C*, calculate the possible values of *p*. [7]
3. Given also that the line passing through *A* and *B* has equation $y=3x-14$, find the co-ordinates of the mid-point of *AB*. [4]

[January 2006 Q9]

**The topics that I need to study further are …**