COORDINATE GEOMETRY

YEAR 9   Name: _____

Question 1 (9 marks)

For each question:

*Write the equation in gradient-intercept form

*Find the gradient

*Find the y-intercept

a) x+y-1=0

b) 3x+6y-12=0

c) ax+by+c=0

Question 2 (6 marks)

Write each question in general form

(given m and b)

a) m = 2   b = 5

b) m = $\frac{2}{3}$ b = $\frac{4}{3}$

c) m = $-\frac{4}{5}$ b = $\frac{7}{10}$

Question 3 (6 marks)

Write each question in

general form:

a) y= -x -8

b) x = - y

c) $\frac{x}{2} - 2y + \frac{1}{5} = 0$

Question 4 (6 marks)

a) Find the mid-point of the

interval joining (-2, 5) to

(3, -3)

b) (1,-4) is the midpoint of P (x,y)

and Q (-3, 7). Find the

co ordinates of P.

Question 5   (6 marks)

For the interval joining A (-15, 22)

to B (- 13, 18) find :

a)   the length of AB (as an irrational no.)

b)   midpoint of AB

c)   the gradient AB

Question 6   (4 marks)

Show that the line joining (-1, 5) to (3, -3) is

parallel to the line 6x + 3y – 4 = 0

Question 7   (4 marks)

Find the equation of the line passing through

(2, -1) is perpendicular to the line

4x – y + 7 = 0

Question 8   (9 marks)

Sketch each of the straight lines.

Show the X and Y intercepts.

a) y = 2x - 1

b) y = - x + 1

c) y = $\frac{-2}{3} x$

Question 9   (4 marks)

The points Z (1, 8), Y (5, 2) and W (-1, -2) are vertices of an isosceles triangle.

Prove that triangle WYZ is an isosceles triangle.

Question 10   (6 marks)

Find the equation of the line through the intersection of $x + y - 4 = 0$

and $3x - 4y - 5 = 0$ and is perpendicular to the line $5x - y + 4 = 0$.

Question 11

Indicate by shading , the regions of a number plane where :

a) $y \geq x + 2$ (4 marks)

b) $3x + y - 1 > 0$ and $x - 2y + 5 \leq 0$ (6 marks)