**The City School**

North Nazimabad Boys Branch

Grade 9

**Topic: Coordinate Geometry**

**Mr. Mohsin Zaki**

**Worksheet 1**

Q1: The coordinates of the points O, A, B and C are (0,0) , (1,5) , (3,4) and (2,-3) respectively. Find

1. AB2
2. the gradient of BC
3. the equation of the line passing through 0 and have the same gradient as AC

Q2: A ( -1,1) and B(5,5) arethe coordinates of a straight line *l*. Given that C is a point that is not on the line AB and having coordinates ( 4,1). Find

1. the gradient of *l*;
2. the equation of *l*;
3. the area of ABC;
4. the length of BC, giving your answer correct to 2 decimal places.

Q3: the equation of a straight line *l* is 5y + 12x – 60 = 0

1. the line *l* cuts the x axis at P and the y axis at Q. Write down the coordinates of P and of Q.
2. find the length of PQ.
3. Another line m has the same gradient as *l* and passes through the point ( 0,-2). Find the equation of the line *l.*
4. The line x = 0 is the axis of symmetry of PQR. Write down the coordinates of R

Q4: Given that the equation of a line AB is 2y – 5x = 4.

1. Find the coordinates of A and B that is cutting x and y axis respectively.
2. Find the area of ABC
3. Calculate the perpendicular distance from C to AB

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**Worksheet 1**

Q1: Does (3, 4) lie on the line with equation 3x 2y - 1=0?

Q2: Does (-2, 5) lie on the line with equation 5x + 3y = -5?

Q3: Find k if (3, 4) lies on the line with equation x - 2y - k = 0

Q4: Find r if (1, 5) lies on the line with equation 4x - 2y = r

Q5:Find the gradient of the line with equation:

1. 3x + y - 7=0
2. 2x - 7y = 8

Q6: A straight line has a gradient of 2 and passes through the point (0,-3).

1. Write down the equation the straight line
2. Given that the line also passes through the point (4,k). find the value of k.

Q7: The equation of a straight line *l* is 5y + 12x – 60 = 0

1. The line *l* cuts the x axis at P and y axis at Q. Write down the coordinates of P and Q.
2. Find out the length, gradient, mid point and equation of PQ
3. The line x = 0 is the axis of symmetry for the triangle PQR. Write down the coordinates of PQR