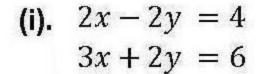
Q.1: Use matrices, if possible, to solve the following systems of linear equations by:

- i. Matrix inversion method
- ii. Cramer's rule



(ii).
$$2x + y = 3$$

 $6x + 5y = 1$

(iii).
$$4x+2y=8$$

 $3x-y=-1$

(iv).
$$3x-2y=4$$

 $-6x+4y=7$

(v).
$$3x-2y=4$$

-6x+4y=7

(vi).
$$4x+y=9$$

 $-3x-y=-5$

(vii).
$$2x-2y=4$$

 $-5x-2y=-10$

- Q.2: The length of a rectangle is 4 times its width. The perimeter of the rectangle is 150 cm. Find the dimensions of the rectangle.
- Q.3: Two sides of a rectangle differ by 3.5cm. Find the dimensions of therectangle if its perimeter is 67cm.
- Q.4: The third angle of an isosceles triangle is 16° less than the sum of the two equal angles. Find three angles of the triangle.
- Q.5: One acute angle of a right triangle is 12°more than twice the other acute angle. Find the acute angles of the right triangle.
- Q.6: Two cars that are 600 km apart are moving towards each other. Their speeds differ by 6 km per hour and the cars are 123 km apart after $4\frac{1}{2}$ hours. Find the speed of each car.