Equation of straight line

Gradient and Straight Line Graph

1. Equation of straight line is y= mx + c , where m = gradient , c = intercept on y- axis .

2. If y = mx or y = - mx . It means that line passes through origin.

3. Two lines are parallel if they have same gradients .
4. Two lines are perpendicular if product of their gradients = -1
i.e. $m_1 . m_2 = -1$.
5. x = a is a vertical line through " a" on the x- axis.

6. y = a is a horizontal line through "a" on the y-axis.

Exercise

Find the gradient and y- intercept from the following straight lines. Draw the graphs as well

1) x -y =0 gradient (m) =_____ y-intercept(c)=_____

2) y = 2 +3x gradient (m) =_____ y-intercept(c)=_____

3) 3x +4y =12 gradient (m) =_____ y-intercept(c)=_____

4) y = 6 -2x gradient (m) =_____ y-intercept(c)=_____

5) 5x +3y =15 gradient (m) =_____ y-intercept(c)=_____

6) y =2x – 3 gradient (m) =_____ y-intercept(c)=_____

7) 5x - 3y = 7 gradient (m) =_____ y-intercept(c)=_____

8) y = 3x gradient (m) =_____ y-intercept(c)=_____

9) 3x = 2y – 7 gradient (m) =_____ y-intercept(c)=_____

10) x + 2y – 5 = 0 gradient (m) =_____ y-intercept(c)=_____