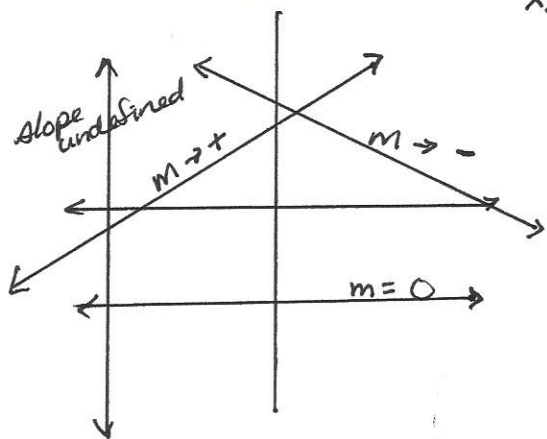


Linear Equations

slope = $\frac{\text{rise}}{\text{run}}$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

If slope is + \rightarrow line goes up
If slope is - \rightarrow line goes down



If $m=0$, line is horizontal
If slope is undefined, line is vertical

Forms of Linear Equations

$y = mx + b$ ($m = \text{slope}$; $b = y\text{-intercept}$)

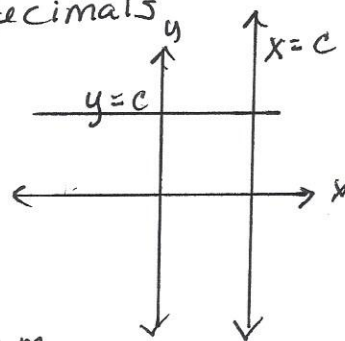
$m(x - x_1) + y_1 = y$ point/slope form
 $m = \text{slope}$
 $(x_1, y_1) \rightarrow \text{point on line}$

$Ax + By = C$ \rightarrow standard form
 $A, B, +C$ are not fractions or decimals

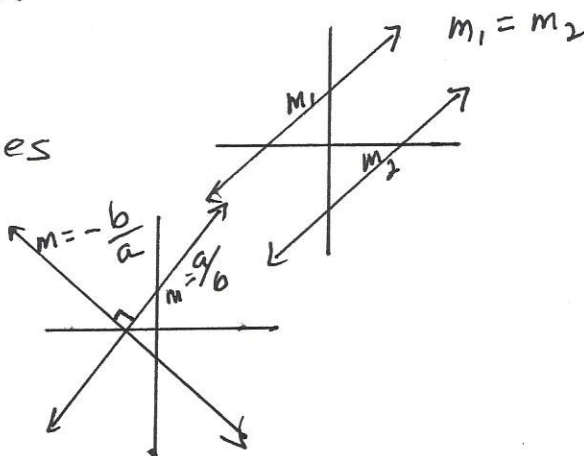
$Ax + By + C = 0$ general form
 $A, B, +C$ are not fractions or decimals

$x = c$ \rightarrow equation of vertical line

$y = c$ \rightarrow equation of horizontal line
(c is a constant number)



Parallel lines have = slopes



Perpendicular lines have slopes that are opposite reciprocals