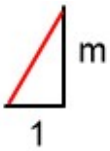
Please copy the notes as almost all students learn better if they write it down.

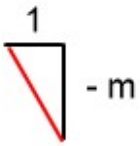
We are now done learning Linear Relations, you will need all of these skills in math 9.

For the general equation $y = m x + b$

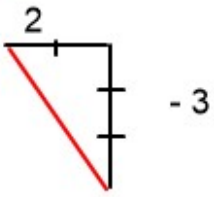
$m = \frac{m}{1}$ = steepness of the stairs or slope



m can be negative $\frac{-m}{1}$

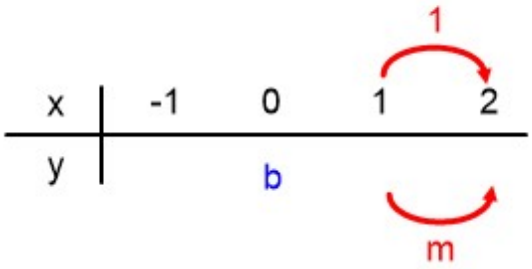


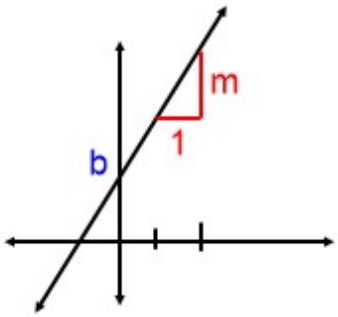
m can also equal a fraction $\frac{-3}{2}$



b = y intercept (when x = 0, y = b)

The m and b can be found on the t - table and can be seen on the graph.





We now apply this to real life examples

Please read Example 2 Page 192

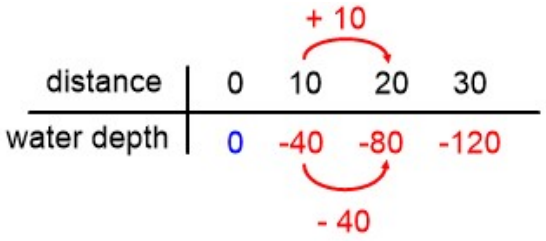
I like this example because it is something we could see in real life, but only man made

Boat launches are linear, the real bottom of the lake would be bumpy.

So with an equation like $y = -2x + 3$ has a slope of minus 2 on each step and starts at 3.

You could see this from the graph or t – chart, but I'm not drawing them.

For our example



So our stairs are for every 10 it goes down 40
We can reduce the to 1 over 4 down

b = 0 (it goes through the origin)

So our equation would be $y = m x + b$

Or **W**ater Depth = - 4 **d**istance Form Shore + 0

$W = - 4 d$

Now we can solve for any point (we could just keep t – table going but that is walking to Vancouver)

How far is from the shore is it when it is 360 m deep?

$W = - 4 d$ now sub the numbers into the equation and solve using algebra

$360 / (- 4) = - 4 d / (- 4)$

$90 = d$

So the boat was 90 meters from shore when it was 360 meters deep.

Assignment Page 194 Questions 1, 2, 4, 7, 8, 9, 12, 16, 19

This is your assignment for the entire week, Please do all of it as it will be helpful for next year.