

Teaching Graphs

Grade 7, 8 and 9

SEARTEC 

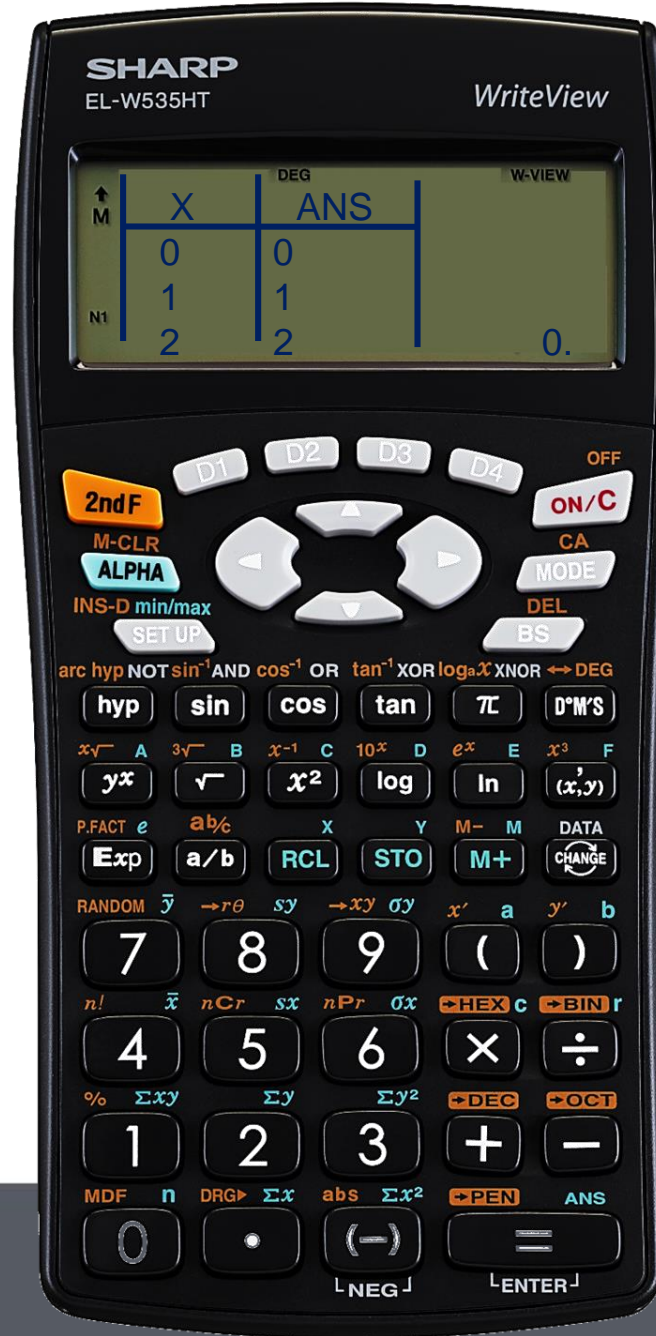
Proud distributor of: **SHARP**

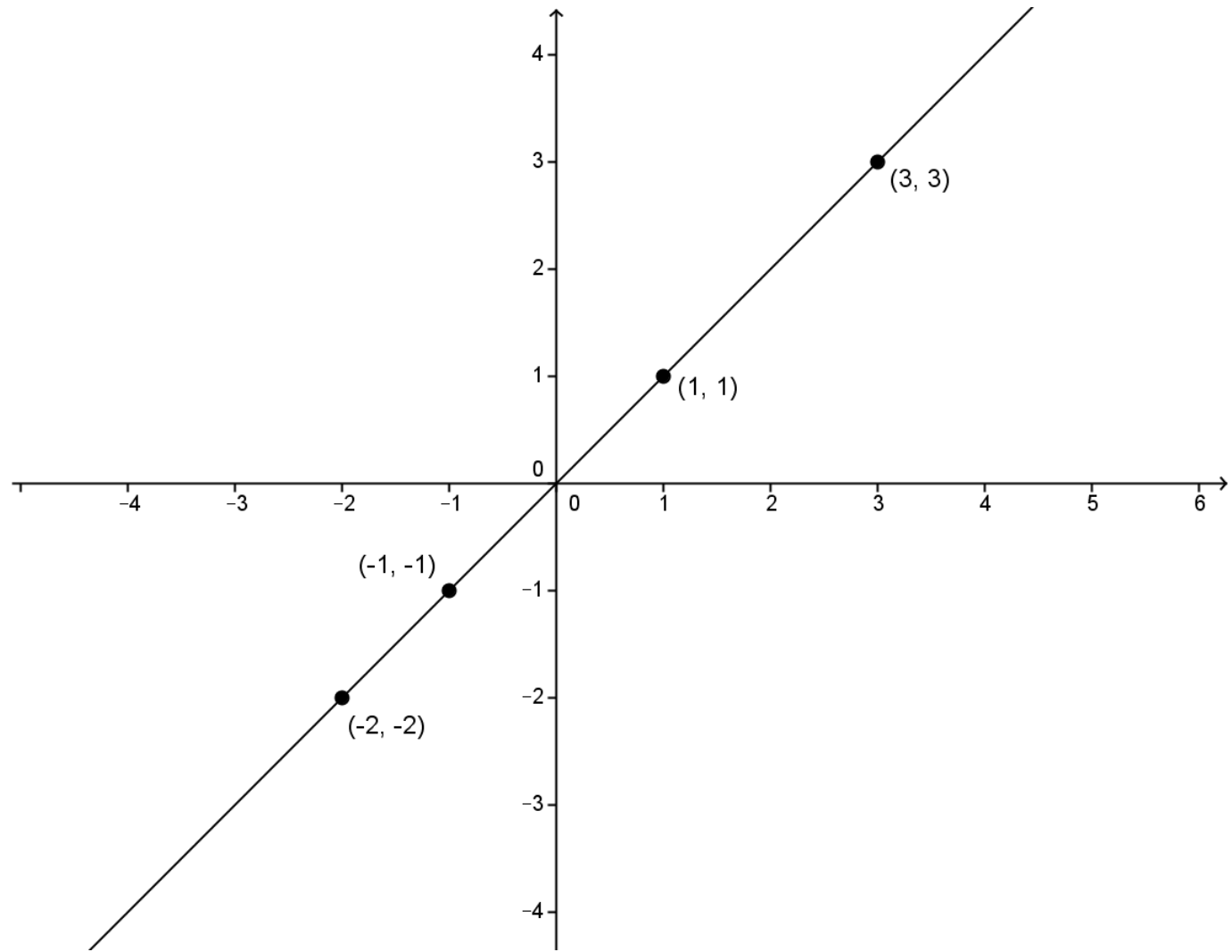
What's the plan for today?

- Graphs
 - Gradient
 - Y-intercept
- Calculating gradient on the calculator
- Finding a line using two points (don't tell your students 😊)
- Finding x and y

Graphs

- Press **ON/C** twice
- Remember when we did the variable exercise? This is also a one to one graph.
- We can plot these points on a graph.
- Press **RCL** twice and **=** three times.

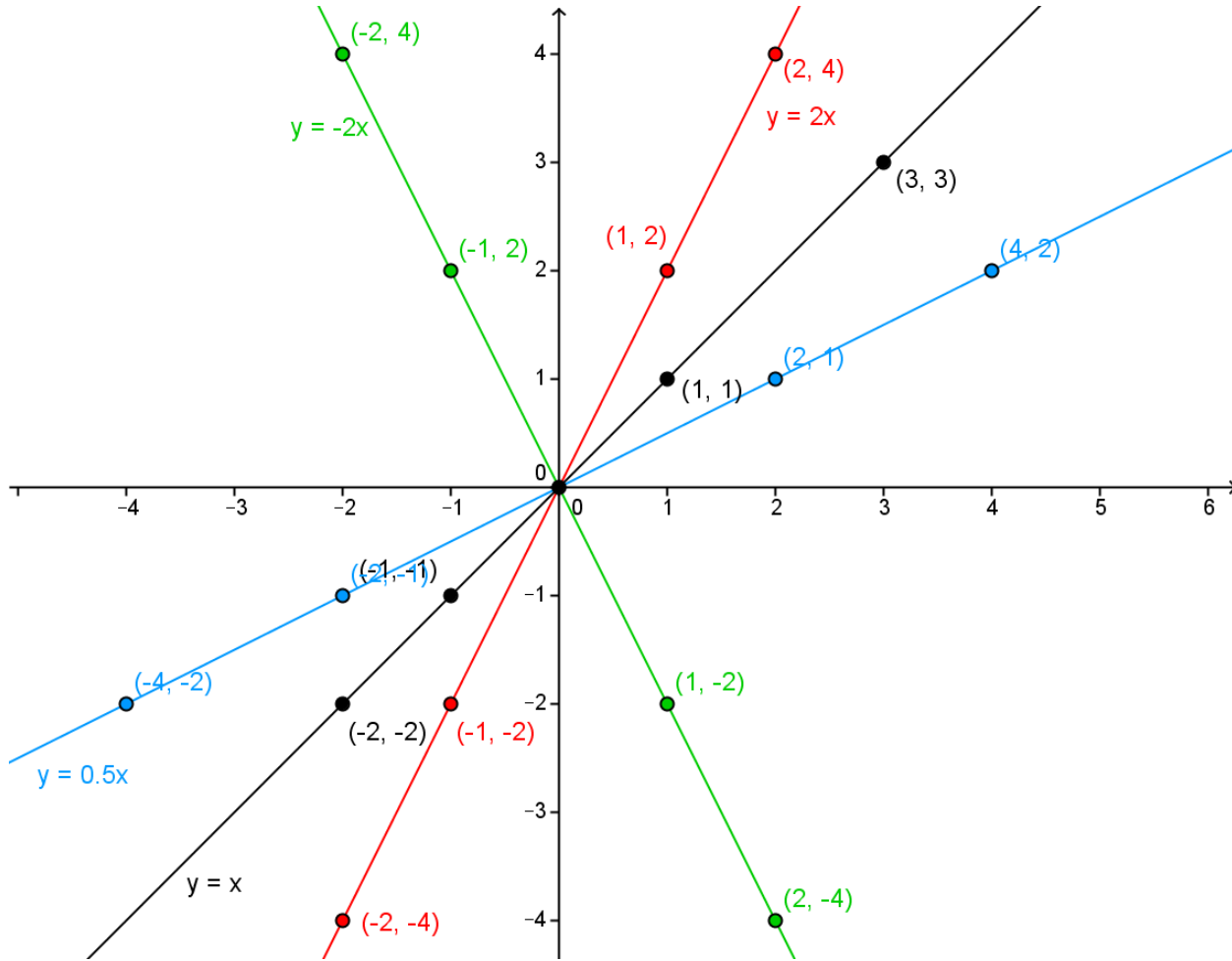




Graphs

- We can change the gradient.
- Press **ON/C** once
- Press **◀** so that the cursor is before X, and type in 2
- Press **=** **=** **=**
- Now what happens to all the numbers in the ANS column?
- What happens if we change 2 to -2 or to $\frac{1}{2}$?



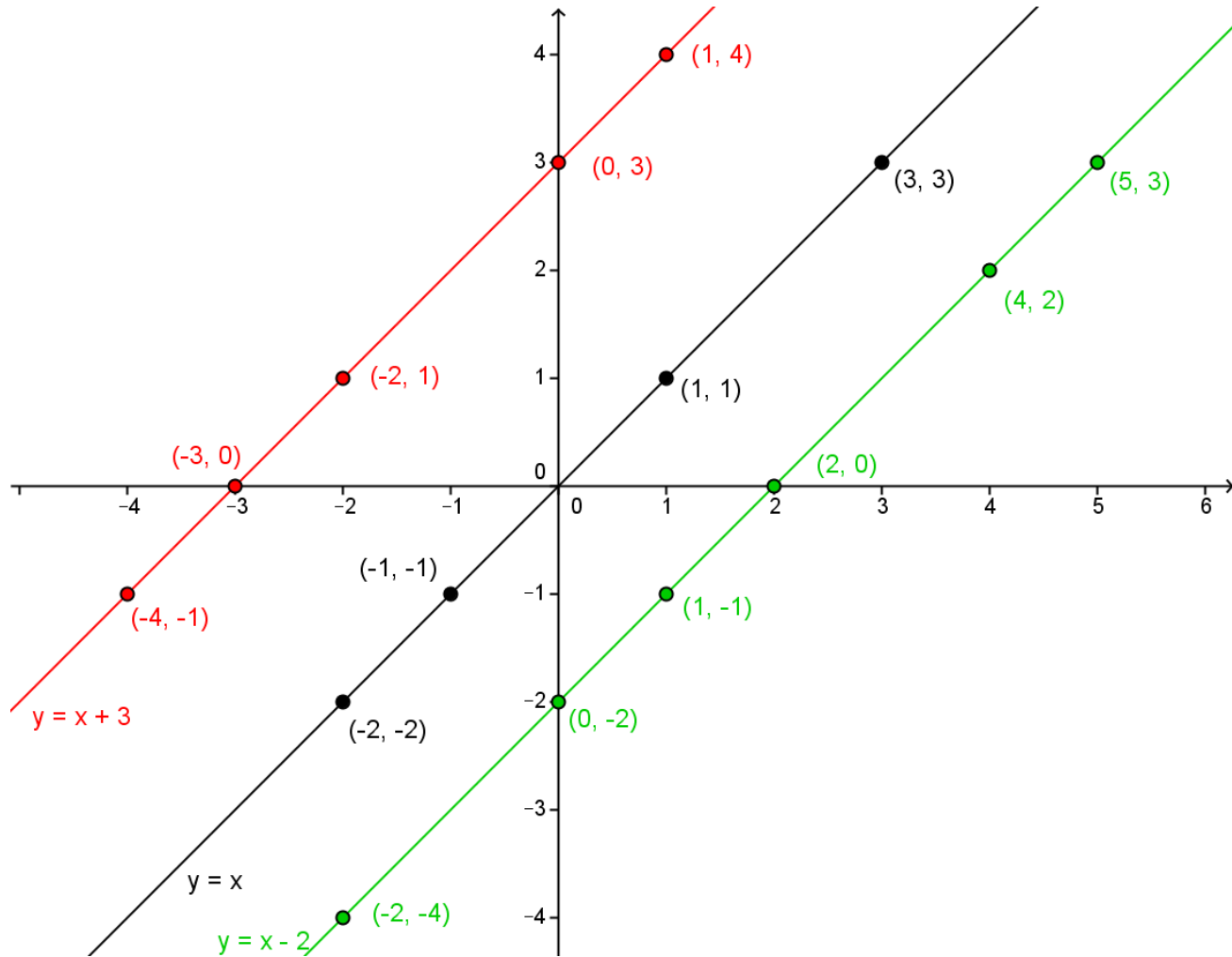


- We can draw each of these graphs in another colour to show the changes.
- So, what happens when we change the gradient?

Graphs

- We can also play with the y intercept.
- Press **ON/C** twice
- Now add 3 so press
RCL **RCL** **+** 3
- Then **=** **=** **=**
- What happens to the values in the ANS column? What happens if we subtract 2 instead?





- We can now draw these graphs along with our original graph as well.
- What happens when we change the y-intercept?

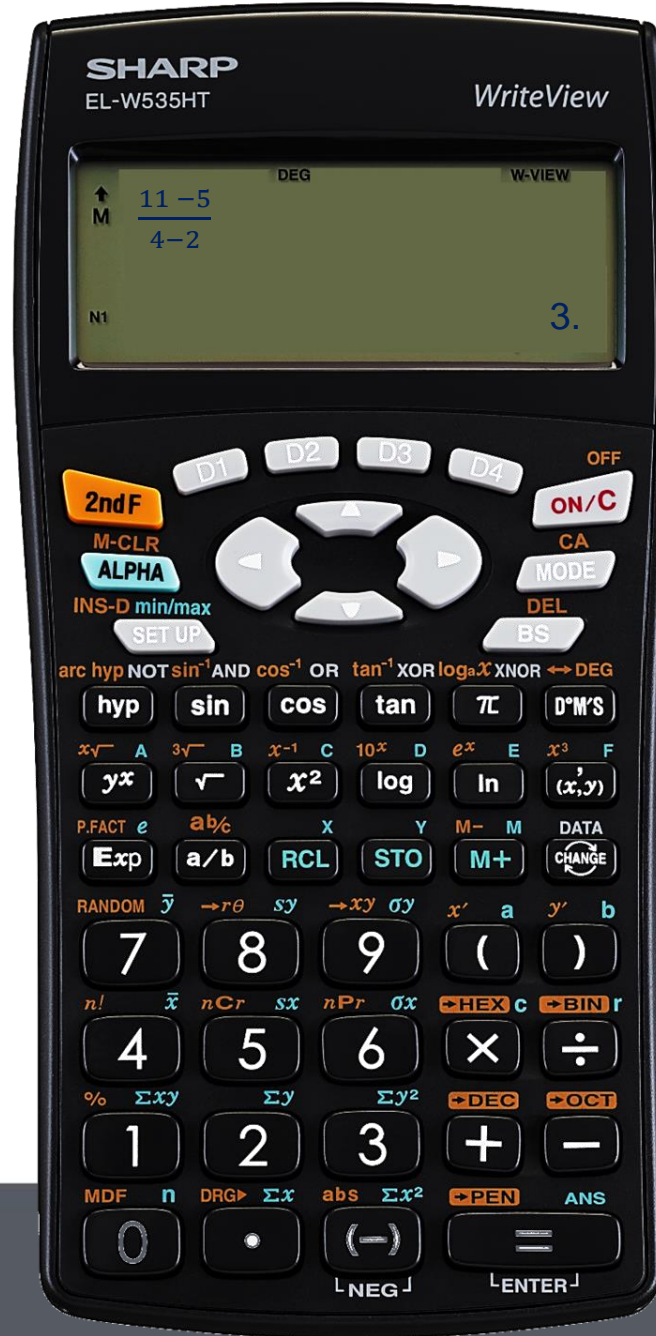
Calculating gradient

- Press **MODE** 0
- E.g. Given the points (2; 5) and (4; 11) – what is the gradient?

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

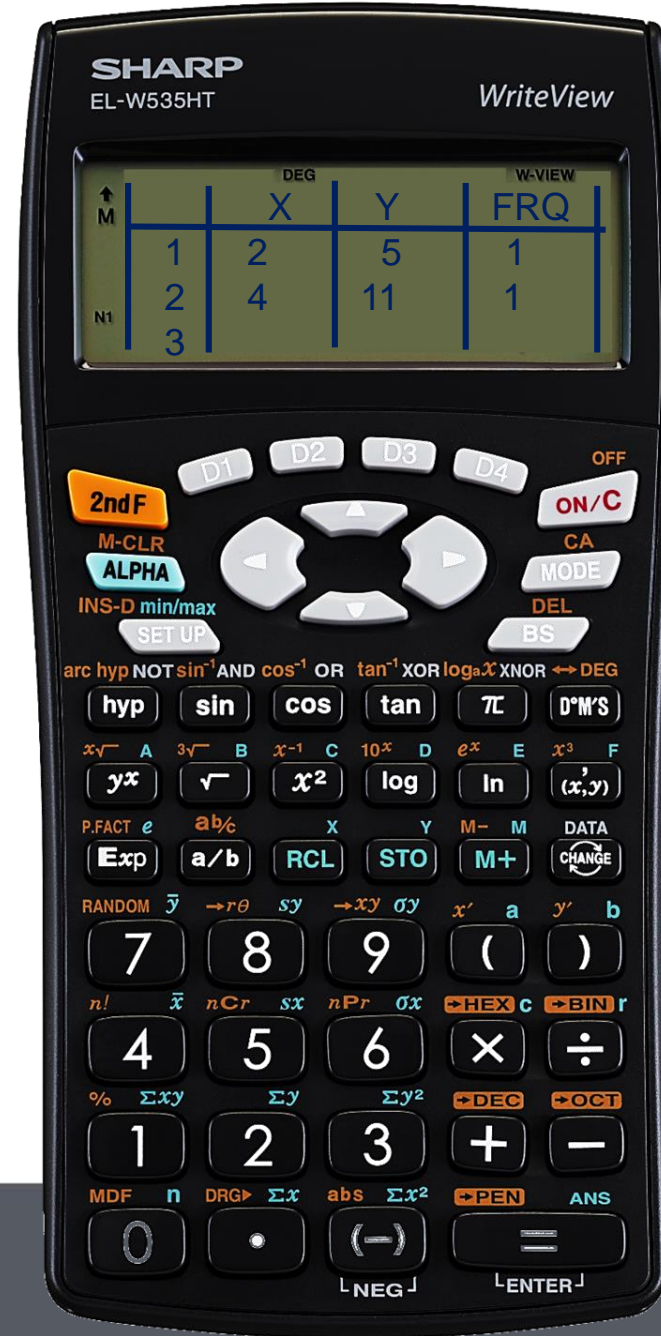
- Press **a/b** 11 **-** 5


- **↵** 4 **-** 2

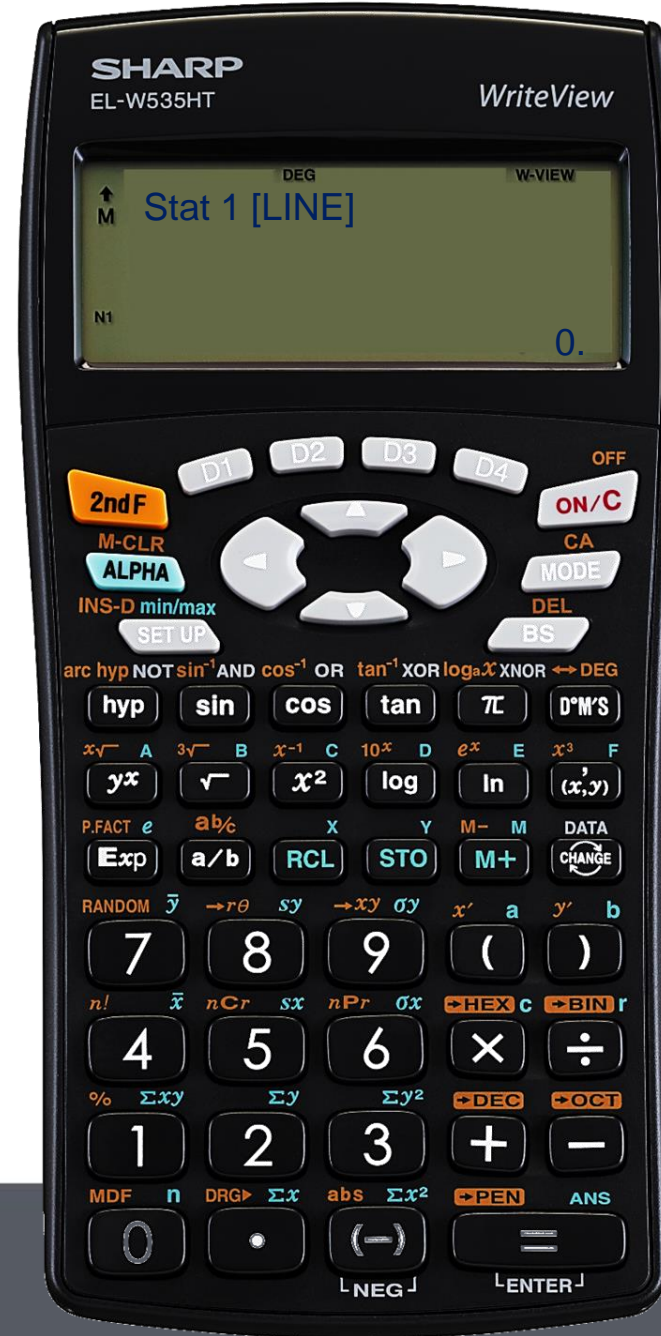


Finding a line using 2 points

- Press **MODE** 1 and choose 1 for Line.
- E.g. (2; 5) and (4; 11).
- In the x column press 2 **=** **ENTER**
- And 4 **=** **ENTER** and **▶** to move the blue block back next to 2 in the x column.
- Type in 5 **=** **ENTER** 11 **=** **ENTER**



- Press 
- We are using linear regression (from grade 12) to find the gradient and y-intercept.
- This means that a = the y-intercept and b = gradient in
- $y = a + bx$



- To find the gradient we press



- To find the y-intercept we press

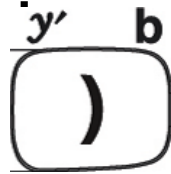


Finding x and y

- If $x = 5$, what is y ?

- Press 5

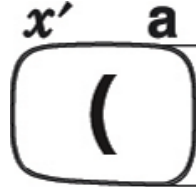
2ndF





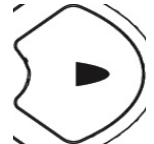
- If $y = 23$, what is x ?

- Press 23

2ndF



Don't forget the competition 😊

- Drill mode (Press  2 0)
- Choose 25 questions (press )
- Choose + - x ÷ (press )
- Fastest time this week wins a microwave 😊



Thank you 😊

Check out www.e-classroom.co.za and www.mathsatsharp.co.za

And don't forget to like us on Facebook 😊

Tal.moore@Seartec.co.za

SEARTEC 

Proud distributor of: **SHARP**