Microsoft Excel makes it easy to calculate the Rise & Fall without making any errors

Students lacking computer skills and can't follow the instruction should contact me.

	A	B	C	D	E	F	G
1	Station	Backsight	Inter mediate	Foresight	Fall(-) Rise(+)	Reduced Level	Remarks
2	A	1.325				**100.000**	
3	B		2.550		-1.225	98.775	
4	C		3.125		-0.575	98.200	
5	D		2.890		0.235	98.435	
6	E		2.050		0.840	99.275	
7	F		1.850		0.200	99.475	
8	G		1.350		0.500	99.975	
9	H		1.970		-0.620	99.355	
10	J		2.830		-0.860	98.495	
11	K	0.900		4.750	-1.920	96.575	Change Point
12	L		1.280		-0.380	96.195	
13	M		2.090		-0.810	95.385	
14	N		1.840		0.250	95.635	
15	O		1.875		-0.035	95.600	
16	P	3.375		0.250	1.625	97.225	Change Point
17	Q		2.760		0.615	97.840	
18	R		1.980		0.780	98.620	
19	S		2.560		-0.580	98.040	
20	T		3.220		-0.660	97.380	
21	U			0.595	2.625	100.005	
22	V	5.600		5.595	0.005		
23			0.005				

Rise & Fall Records using Microsoft Excel

Column A	Station alphabetical
Cell B22	Sum of Backsight
Cell D22	Sum of Foresight
Cell E22	Sum of Rise & Fall
Cell C23	Backsight minus Foresight

Formula Sheet shows you the formulas that have been used to calculate the

Rise and Fall

and the

Reduced Levels

Remember: First activate the cell in which the formula goes then type = and select the data cell and the operand (+, -, * or /)

	A	B	C	D	E	F	G
1	Station	Backsight	Inter mediate	Foresight	Fall(-) Rise(+)	Reduced Level	Remarks
2	A	1.325				100	
3	B		2.55		=B2-C3	=F2+E3	
4	C		3.125		=C3-C4	=F3+E4	
5	D		2.89		=C4-C5	=F4+E5	
6	E		2.05		=C5-C6	=F5+E6	
7	F		1.85		=C6-C7	=F6+E7	
8	G		1.35		=C7-C8	=F7+E8	
9	H		1.97		=C8-C9	=F8+E9	
10	J		2.83		=C9-C10	=F9+E10	
11	K	0.9		4.75	=C10-D11	=F10+E11	Change Point
12	L		1.28		=B11-C12	=F11+E12	
13	M		2.09		=C12-C13	=F12+E13	
14	N		1.84		=C13-C14	=F13+E14	
15	O		1.875		=C14-C15	=F14+E15	
16	P	3.375		0.25	=C15-D16	=F15+E16	Change Point
17	Q		2.76		=B16-C17	=F16+E17	
18	R		1.98		=C17-C18	=F17+E18	
19	S		2.56		=C18-C19	=F18+E19	
20	T		3.22		=C19-C20	=F19+E20	
21	U			0.595	=C20-D21	=F20+E21	
22		=SUM(B2:B21)		=SUM(D2:D21)	=SUM(E3:E21)		
23			=B22-D22				

Microsoft Excel Formula Sheet

Record the data (Backsight, Intermediate sight & Foresight) in the appropriate columns cells.

1) Click on Cell **E3** (make it active) and select the = sign.
Now you can put the formula in the cell
(Always use the = sign for formula input)
Then click on cell **B2** hit the minus button and click on **C3** **hit ► Enter** (first formula is entered in **F5** Value = -1.225 is shown

2) Make Cell **E4** active and select =
then click on C3 minus **C4** and ► Enter (Value = -0575)

3) Copy the formula down to Row 10.

4) Make Cell **E11** active and select = (Change Point ROW)
click on **C10** minus **D11** ► Enter (Value =-1.92)

5) Make Cell **E12** active and select = (Change Point ROW)
then click on **B11** minus **C12** ► Enter (Value =-0.38)

6) Make Cell **E13** active and select =
now click on **C12** minus **C13** ► **Enter (Value =-0.81)**

7) copy the formula down to Row 15

Follow the above steps to finish the formulas in **Column E**

Then do the Rise & Fall calculation

Make **Cell F3** active and select =
click on **F2** (Bench mark) plus **E3** ► Enter (Value 98.775)
Now copy this formula dow to **F21** and all calculations are done for you. (It's that easy, insn't it?)