

Task 4: Investigating correlation between measurements

In this task we investigate to see if there is correlation between any two of the six measurements, using scatterplots.

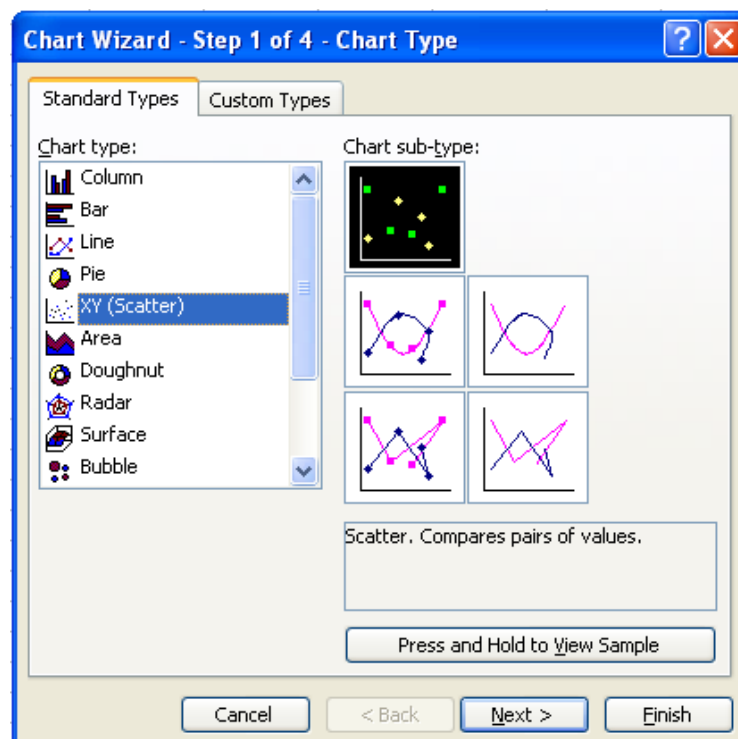
- (1) Insert a new worksheet and name it as “X1 vs X2”.
- (2) Copy and paste the Island, X1 and X2 values from the “Dolphins data” worksheet to the “X1 vs X2” worksheet.
- (3) In the the “X1 vs X2” worksheet, draw the following table and fill in the table by copying and pasting appropriate values from X1 and X2 values.

North Island	North Island	South Island	South Island
X1	X2	X1	X2

- (4) Click on the **Chart Wizard** icon in the Tool bar.



- (5) Select the **XY (Scatter)** option in the **Standard Types**, then the first option in the **Chart sub-type**. Click **Next >**.



- (6) Select the entire table in the **Data range** box on the **Data Range** tab, as shown below. Do not click on **Next >** yet.

	E	F	G	H	I	J	K	L	M	N
	North Island X1	North Island X2	South Island X1	South Island X2						
	284.00	57.00	264.00							
	287.00	59.00	265.00							
	296.00	57.00	276.00							
	300.00	61.00	277.00							
	302.00	62.00	280.00							
	302.00	57.00	282.00							
	304.00	58.00	284.00							
	310.00	62.00	284.00							
	310.00	63.00	284.00							
	313.00	63.00	284.00							
	315.00	59.00	289.00							
	317.00	63.00	289.00							
	319.00	64.00	301.00							
			251.00							
			265.00							
			270.00							
			273.00							
			273.00							
			275.00							
			276.00							
			277.00							
			278.00							
			279.00							
			281.00							
			283.00							
			285.00							
			285.00							
			285.00							

- (7) Click on the **Series** tab, and then click **Add** button under the **Series** box.

Chart Wizard - Step 2 of 4 - Chart Source Data

Data Range Series

To create a chart, click in the Data range box. Then, on the worksheet, select the cells that contain the data and labels you want in the chart.

Data range:

Series in: Rows Columns

Series

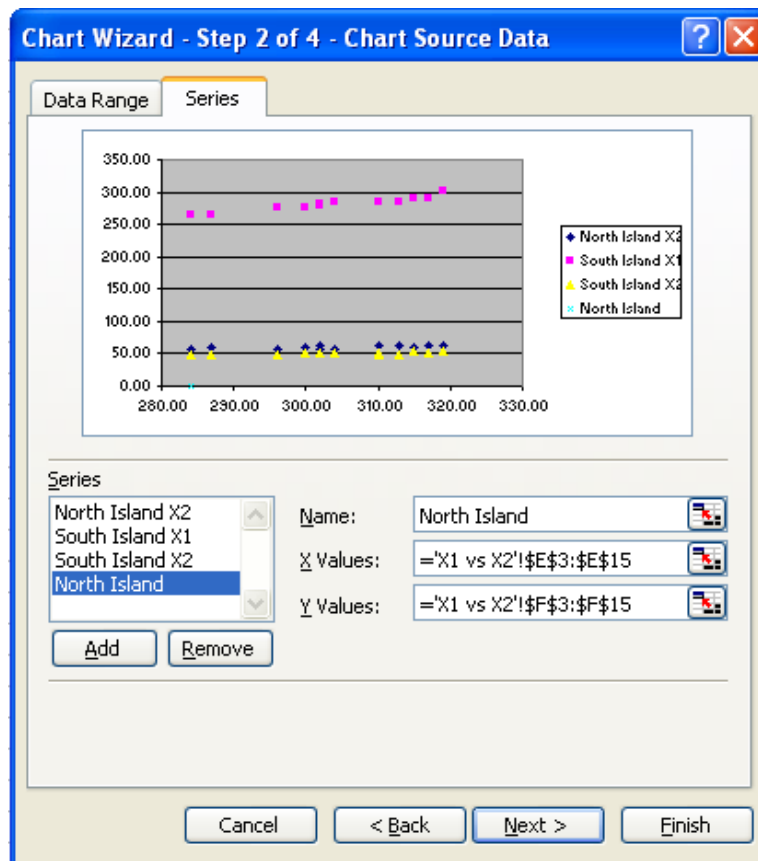
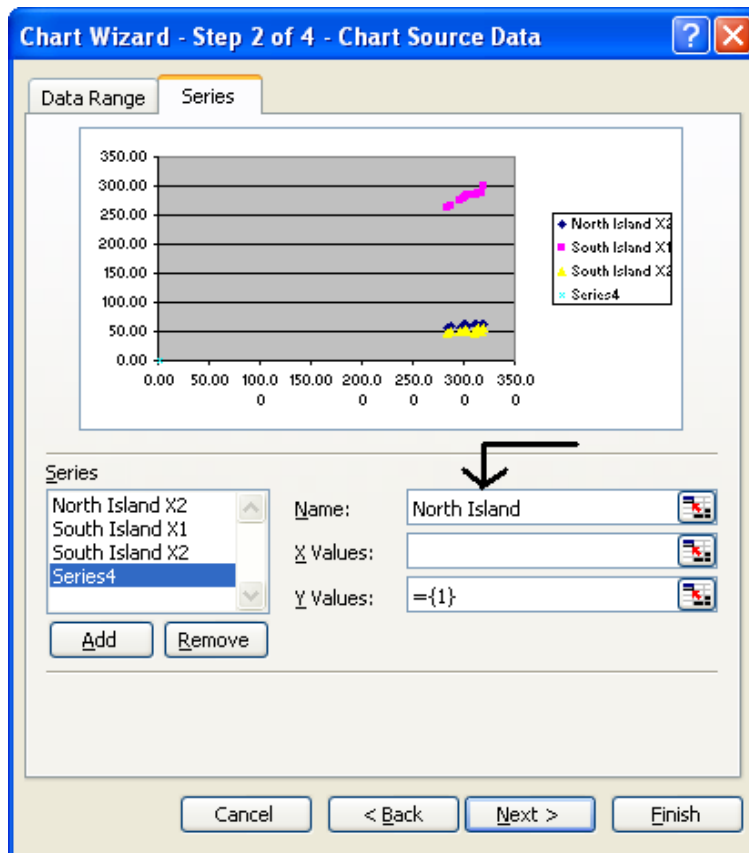
North Island X2
South Island X1
South Island X2

Name:
 X Values:
 Y Values:

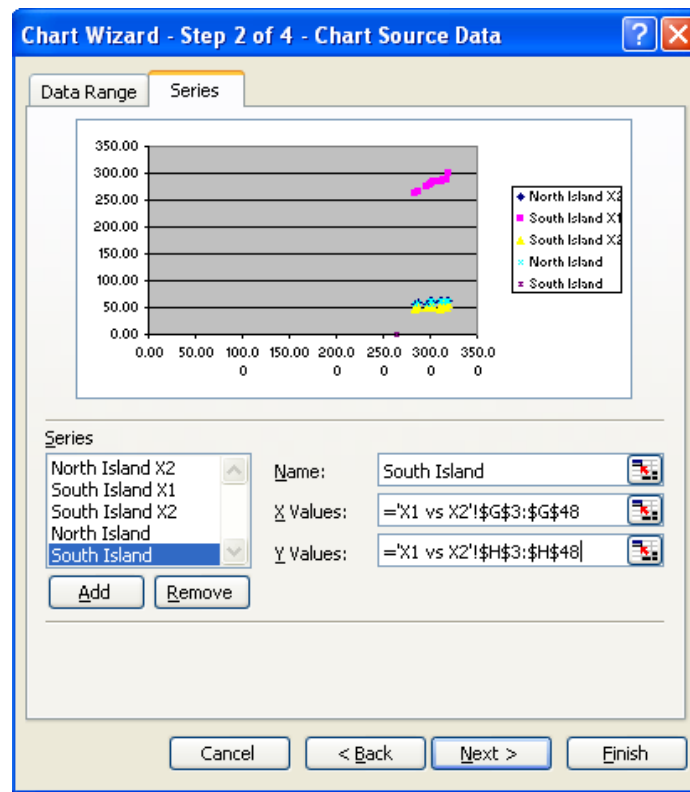
Add Remove

Cancel < Back Next > Finish

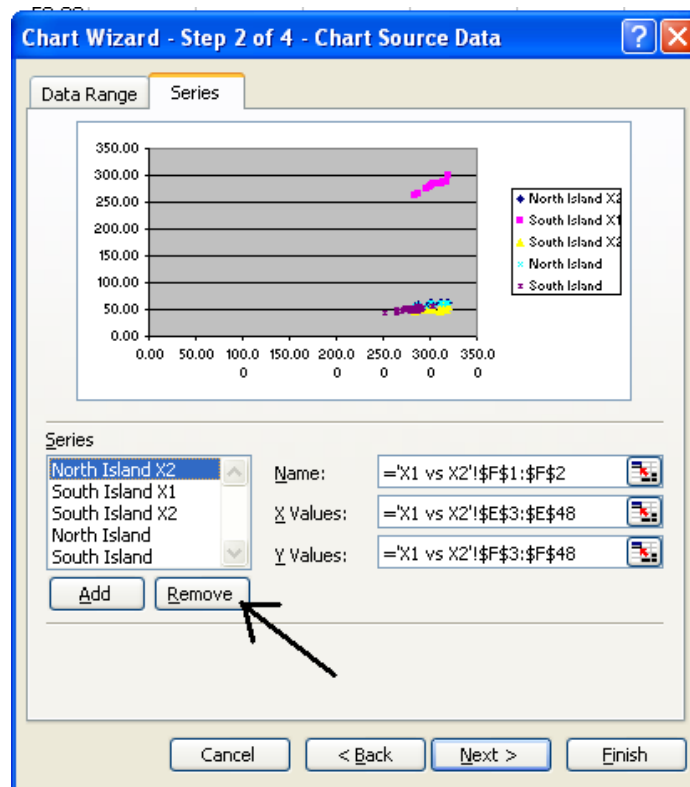
- (8) Type “North Island” in the **Name** box. Then, select the 13 X1 values of the North Island sample in the **X Values** box and the 13 X2 values in the **Y Values** box.



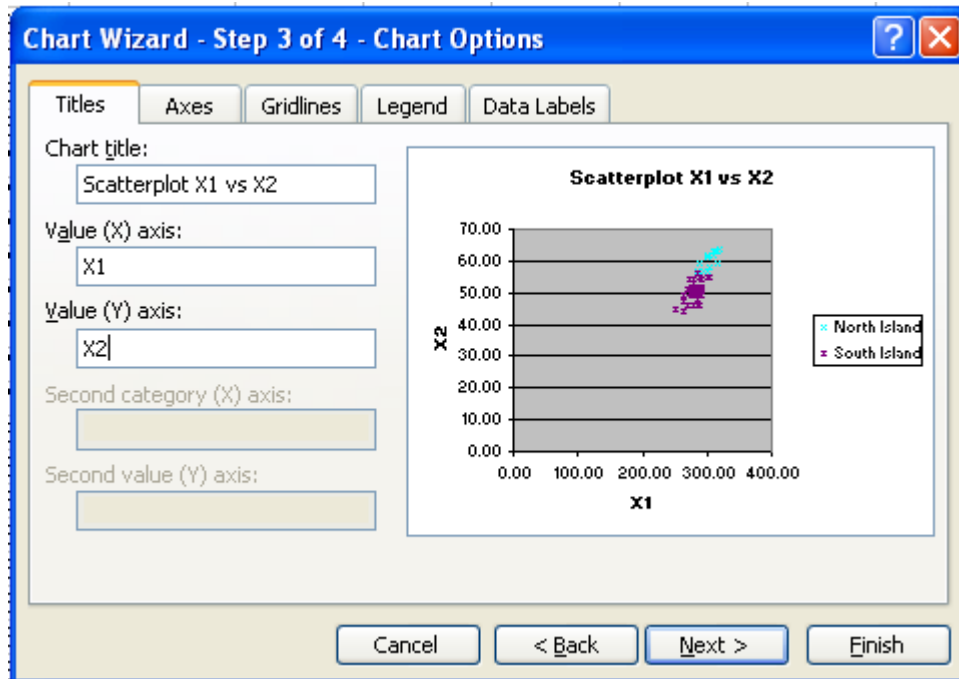
- (9) Click on the **Add** button again and name it as “South Island”. Select the 46 X1 values of the South Island sample in the **X Values** box and the 46 X2 values in the **Y Values** box.



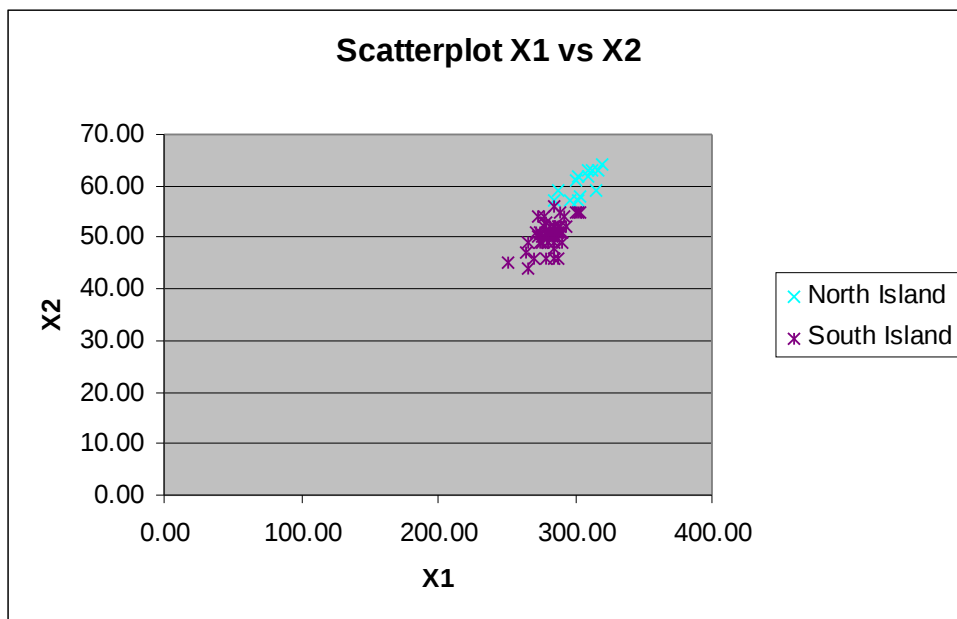
- (10) Click on **North Island X2** in the **Series** box, then click the **Remove** button.



- (11) Repeat the step (10) twice to remove **South Island X1** and **South Island X2**. Then, click on **Next >**.
- (12) Enter an appropriate title and axis labels. Click **Finish**.



The following scatterplot should now appear.



- (13) Repeat the steps (1) ~ (12) for other pairs, for example, X3 and X5.

Congratulations! You have successfully completed this task.

Do not forget to save all the worksheets you created, as we need to use them later for other tasks.

Name your worksheets appropriately, so that you can recognise them later.