

Appendix E: Using Excel to Calculate the Average and Standard Deviation

Excel can be used to calculate the average value of a set of measurements and the standard deviation. To use Excel for this purpose, follow these steps.

- 1 Enter the readings in the first column. In this example, the values entered in cells A3 to A7 are the height (in inches) of five students (see Fig. 1 below).

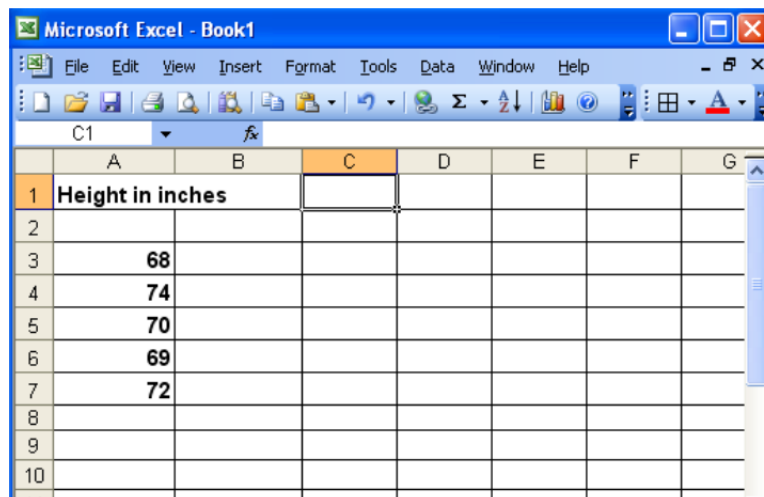


Figure 1: Entering your data

- 2 In cell A8 type = and select **AVERAGE** from the pull-down menu (see Fig. 2 below).

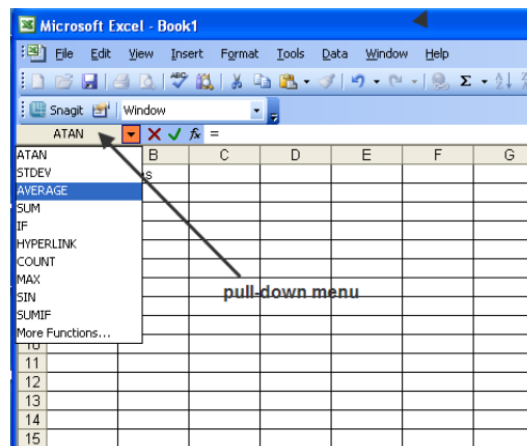


Figure 2: Selecting from the pull-down menu

- 3 The Functions Argument window with A3:A7 in the Number 1 field is displayed as shown in Fig. 3 below.

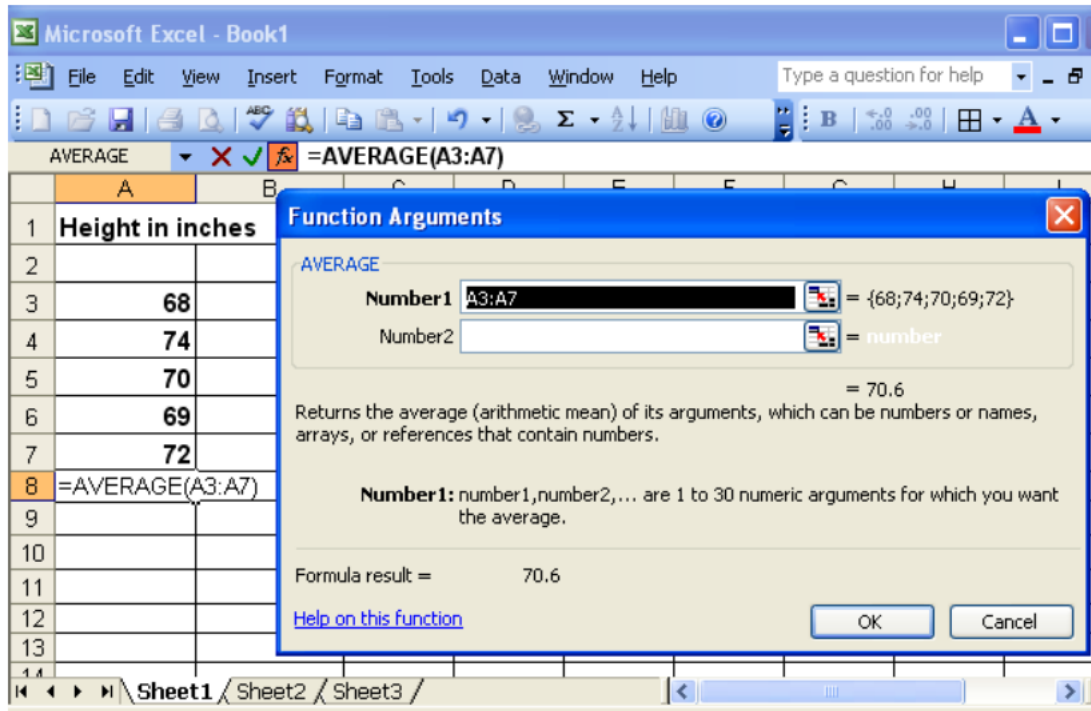


Figure 3: Finding the average value

- 4 Select **OK**. The average of the five values is displayed.

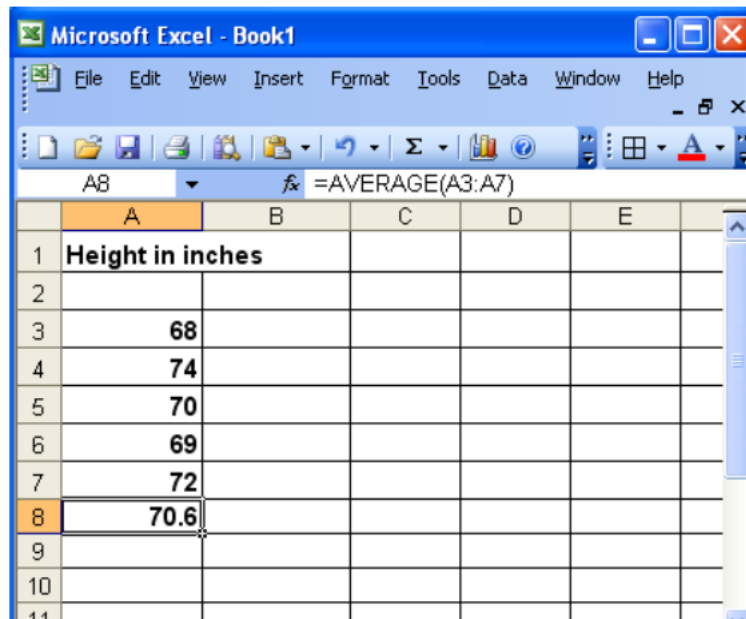


Figure 4: Average value is displayed

Alternately, you can combine steps 2, 3, and 4 by typing = **AVERAGE(A3:A7)** and pressing **ENTER**.

- 5 In cell A9, type = and select **STDEV** from the pull-down menu. The Function Argument window is displayed.

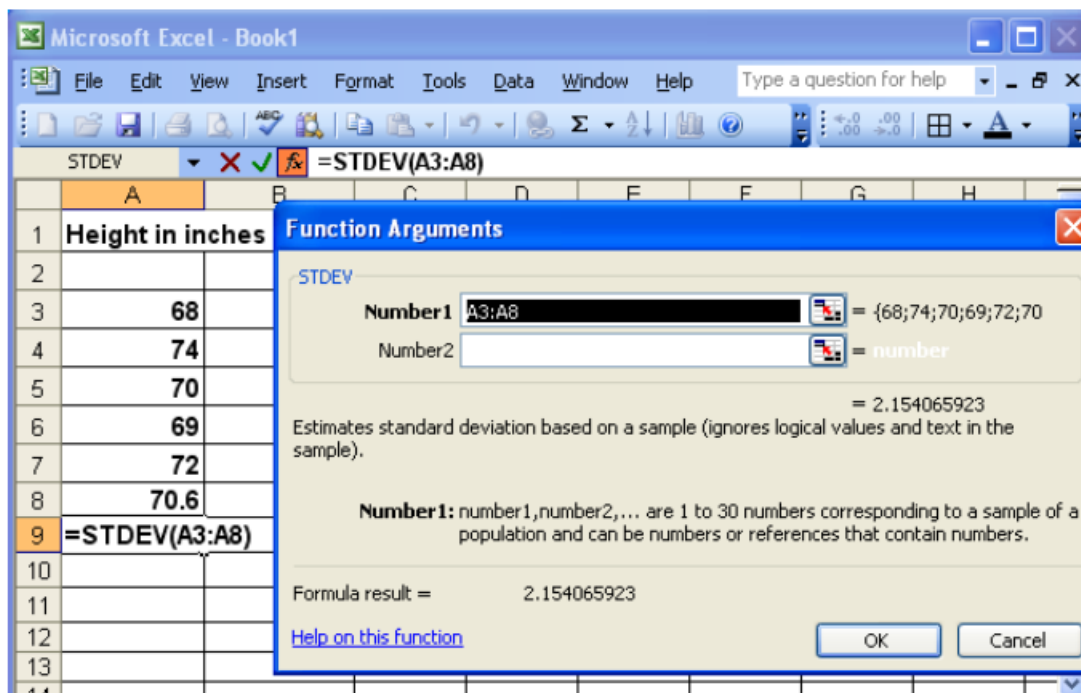


Figure 5: Finding the standard deviation

- 6 Excel automatically calculates the standard deviation of the five heights and the average. To input the correct range, click the icon to the right of the Number 1 field and select cells A3 through A7.

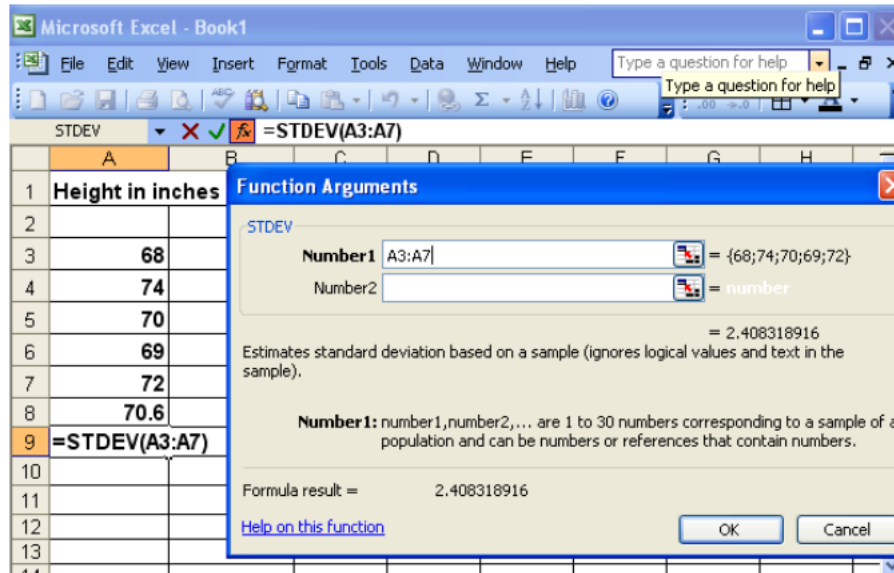


Figure 6

7 Click **OK**. The standard deviation is displayed.

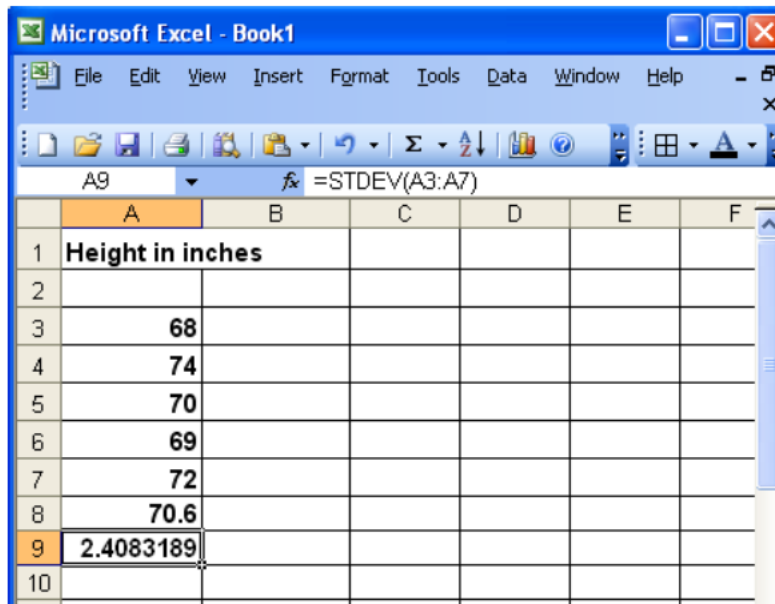


Figure 7