

**Student Activity: To investigate the effect of adding an extra data item to a data set, when the value of this data item is zero.**

**Use in connection with the interactive file “Effect on Mean by adding a new data item” on the Student’s CD.**

1. Calculate the mean of the data set 8, 7, 6, 5, and 4 manually.  

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2. Insert the following data set 8, 7, 6, 5, 4 into the interactive file. Click to calculate the mean.  

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3. What was the mean in the interactive file and did it agree with the answer you got in No 1? If not recheck your work in No 1.  

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4. Calculate the mean of the data set 8, 7, 6, 5, 4 and 0 manually.  

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5. Click arrows 3 and 4 in the interactive file to check your answer to No 4.  

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6. What was the difference in the data sets in No 1 and No 4 and are their means equal?  

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7. Click the button to reset the interactive file. Insert a data set of your own and after clicking the arrows 1-4 answer the question “Are the Mean and New Mean related?” Repeat this question once more.  

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8. If one adds a new data item that is equal zero to a data set, is the mean of the new data set always going to be bigger or smaller than the mean of the original data set? Explain why.  

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