

## **Student Activity: To investigate the effect of adding a common constant to all data.**

**Use in connection with the interactive file "Effect on Mean by adding a constant" on the Student's CD.**

1. Calculate the mean of the following data set 5, 4, 3, 2, 1 manually.

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2. Insert the data set 5, 4, 3, 2, 1 into the interactive file. Click the arrow No 2 to calculate the mean.

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3. Calculate the mean of the following data set 10, 9, 8, 7, 6 manually.

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4. Insert 5 as the common constant in the interactive file and click to calculate the new mean. Explain what this does to each data item and record the new mean.

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5. Repeat with different common constants. Do you notice any relationship between the mean before the common constant is added and the mean after the common constant is added?

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6. What is the effect on the mean of a set of data items of adding a common constant to all items in the data set?

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7. If the mean of a set of 100 data items is 55 and 10 is added to each data item, what will the new mean be?

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8. If 5 is added to each item in a data set and the mean is found to be 23, what would the mean of the original numbers have been?

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