Unit 6, Lesson 11

# Gone in 30 Seconds

Let's gather and analyze some timing data.

## 11.1 Measuring 30 Seconds

In this activity, you'll get 2 chances to guess at how long 30 seconds is, then look for an association between the 2 guesses of all students.

1. Work with a partner. Follow the instructions listed here to gather your data.
   - One of you will hold a stopwatch where the other person cannot see it.
   - The person holding the stopwatch says "go" and starts the timer.
   - The other person says "stop" when they think 30 seconds have passed.
   - The person holding the stopwatch will stop the timer then report and record the time to the nearest second.
   - The person holding the stopwatch will give a second chance, repeating the experiment.
   - After *both* times are recorded, switch roles.

2. Record the group data in this table. When you finish, a group member should give the data to the teacher.

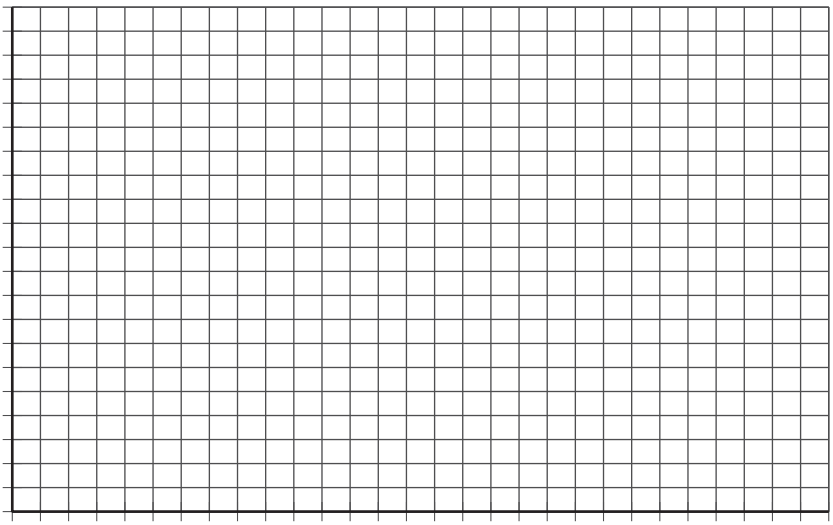
| name | time 1 | time 2 |
|---|---|---|
| | | |
| | | |
| | | |
| | | |

3. Look at your data. Comparing Time 1 to Time 2, do you think there is a positive association, a negative association, or no association? Discuss your thinking with your group.

4. What are some ways you could organize and represent the entire class's data?


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5. Make a scatter plot of the entire class's data and look for patterns. Identify any outliers and the type of any association you observe.



6. Draw 2 lines on your scatter plot: a vertical line and a horizontal line, each representing 30 seconds for one trial. Use the table for the class's data to complete this two-way table.

| | time 2 < 30 sec | time 2 = 30 sec | time 2 > 30 sec | total |
|---|---|---|---|---|
| time 1 < 30 sec | | | | |
| time 1 = 30 sec | | | | |
| time 1 > 30 sec | | | | |
| total | | | | |

7. Use the two-way table to decide whether there is an association between Time 1 and Time 2. Explain how you know.


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