

For each of the following problems, underline the two variables. Identify which is the independent variable and which is the dependent variable.

- 1) Determine the relationship between the grade a student gets on a test and how long the student studied.
- 2) Determine the relationship between the number of cigarettes smoked per day and the risk of getting lung cancer.
- 3) Determine the relationship between the temperature of water and the time it takes sugar to dissolve in it.
- 4) Determine the relationship between the number of roses on a rose bush and the amount of fertilizer used.
- 5) Determine the relationship between the width of the trees in a forest and how close together the trees were planted.
- 6) Determine the relationship between the average speed a car is driven and how many miles per gallon the car gets.
- 7) Determine the relationship between the height of a candle and the number of hours the candle has burned.
- 8) Determine the relationship between the distance a marshmallow is from a campfire and how long it takes to toast the marshmallow.

A scientist was designing an experiment to solve this problem:

**Problem:** Determine the relationship between the amount of water used and the time it takes the water to boil.

Only one of the following experiments was set up correctly.

- (A) Identify the correct experiment.
- (B) Identify at least one mistake in each of the other experiments.

	Trial 1	Trial 2	Trial 3	What's wrong?
#1				
#2				
#3				
#4				
#5				
#6				