

Name: _____

Date: _____

The Simpsons - Identifying the Controls and Variables

Experiment 1 Smithers thinks that a special juice will increase the productivity of workers (how hard they work). He makes two groups of 50 workers each and gives each group the same job (stapling papers). Group A is given the special juice to drink while they work. Group B is not given the special juice. After 1 hour, Smithers counts how many papers each group has made. Group A made 1,587 stacks, Group B made 2,113 stacks.



Answer:

1. Which is the **control** group? _____
2. Which is the **experimental** group? _____
3. Identify the **independent** variable. _____
4. Identify the **dependent** variable. _____
5. What should Smithers' conclusion be (did the juice work?) _____

Experiment 2 Homer sees that his shower is covered in green slime. His friend Barney tells him that coconut juice will get rid of the green slime. Homer decides to check this out by spraying half of the shower with coconut juice. He sprays the other half of the shower with water. After 3 days of "treatment" there is **no change** - the slime is still on both sides of the shower.



Answer:

1. What is Homer's **hypothesis**? _____
2. What is Homer's **conclusion**? _____
3. What is the **control** group? _____
4. What is the **experimental** group? _____
5. What is the **independent** variable? _____
6. What is the **dependent** variable? _____

Experiment 3 Bart thinks that mice exposed to microwaves will become very strong. He decides to do an experiment: he puts 10 mice in a microwave for 10 seconds. 10 other mice were not put in the microwave. He covered the mouse food with a block - 9 out of 10 of the microwaved mice were able to push the block away. 6 out of 10 of the non-microwaved mice were able to push the block away.



Answer:

1. What is the **control** group? _____
 2. What is the **experimental** group? _____
 3. What is the **independent** variable? _____
 4. What is the **dependent** variable? _____
 5. What is Bart's conclusion? _____
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Experiment 4 Lisa is working on a science project. She asks the question: "Does Rogooti (hair product) speed up hair growth (make it grow faster)"? Her family is going to volunteer for the experiment.



Answer:

1. Explain how Lisa will do this experiment. What is the control group, and the independent and dependent variables?

2. What would Lisa's hypothesis be? _____
 3. What could a conclusion be? _____
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