

**LESSON  
6.5****Practice C**

For use with the lesson "Compare Surveys, Experiments, and Observational Studies"

1. Describe how to correct the flaw in the question shown below.  

"Do you support the public transit administration's plan to replace the current energy inefficient buses with new buses?"
2. Tobias describes the situation shown below as an experiment. Is he correct? Explain.

*A seamstress sews with universal needles and ball-point needles. She sews 5 shirts using a universal needle and 5 shirts using the ball-point needle. Three of the 5 shirts sewn with a universal needle had skipped stitching.*

3. Determine whether the study described in the report at the right is a randomized comparative experiment. If it is, describe the treatment, treatment group, and control group. If it is not, explain why not and whether the conclusions drawn from the study are valid.

**Beta-Blockers Affect Pulse Rate During Surgery**

A recent study shows that beta-blockers decrease the pulse rate of patients during surgery. The study observed 35 randomly selected patients during surgery who received a beta-blocker and 35 randomly selected patients who did not receive a beta-blocker. The pulse rate of patients who did receive a beta-blocker decreased 76% of the time.

4. Design an observational study given the research topic shown below.  

*You want to know if students who attend math coach class earn higher grades than those who do not attend coach class.*
5. Design an experiment given the research topic shown below.  

*You want to study the effect that the use of LED light bulbs in homes has on utility bills.*