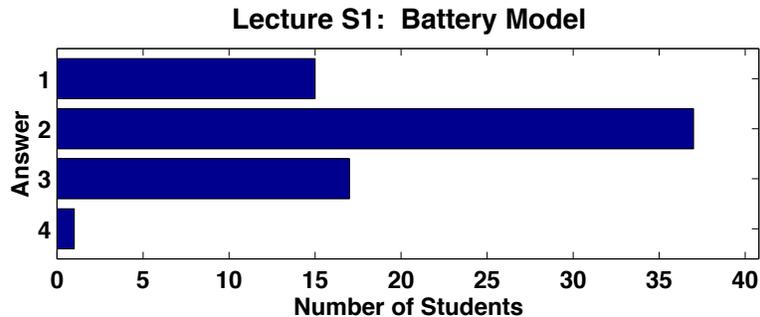


# Battery Model Concept Test

**True or False: A good model for a 1.5 V D cell battery is a 1.5 V voltage source.**

- 1. True — the voltage of a 1.5 V battery is very close to 1.5 V.**
- 2. False — the load on the battery will always reduce the voltage somewhat, whereas the voltage of a voltage source is constant no matter the load.**
- 3. Could be true or false, depending on the circumstances.**
- 4. Don't know.**

# Battery Model Solution



It is true that *any* load on a real battery will change the battery voltage somewhat. For that reason, many in the class picked #2 as the solution. However, #2 is not the correct solution, because in some circumstances, the variation in voltage is small enough that it may be ignored. In those circumstances, a voltage source is a good model for a battery. So the correct answer is #3 — the choice of the best model depends on the circumstances.