

Name: _____

Math 212 POW Two

FORMAT

- Write neatly and clearly on white paper (lined or unlined)

▪

Before starting your problem solving process:

- ✓ Refer to your POW directions (linked to your Math 212 home page)
- ✓ Read **all** of the directions given here

Use Polya's four-step problem solving process throughout. Clearly mark each of the four steps.

Two engineering students were discussing the need for engines that conserve energy. One student told of three new devices that could be installed in an engine: one saved 20 percent on fuel, another saved 30 percent, and the third saved 50 percent. "But that's not possible," said the other student, "that's a savings of 100 percent—the engine wouldn't require any fuel!" What is the total percent of fuel that could be saved if all three devices were used?

Hint: Think of installing first one device, then the next and then finally the third device.

Support your work with clearly labeled and explained diagrams.