Word Problems

What makes word problems hard?

✓ No clear strategy on how to get started
✓ Not familiar with vocabulary and how it translates
✓ Not trained in how to distinguish important from unimportant information
How to Approach Word Problems?

**Tools**

✓ Reading strategies
✓ Translation list – words to math symbols
✓ Problem solving strategies

**Activities**

✓ Word problems basic steps
✓ Structural group activity
✓ TAPPS
Steps in Solving a Word Problem

1. **Identifying relevant information.** Read the problem carefully.

2. **Planning.** Detail the steps involved in solving the problem.

3. **Computing.** Solve the problem based on your plan.

4. **Answering.** Interpret the result from the computation and check if the answers make sense. Include units (if applicable)
Focus: Identifying Relevant Information

✓ Students often jump into the problem computation without taking the time to extract the full information

✓ Skills to be practiced:
  • Assign variables to unknown quantities
  • Identify what the problem asks you to do
  • Translate the English sentences into mathematical equations
Thinking Aloud Pair Problem Solving

✓ One student is the **problem solver** and says **out loud** whatever goes on in his/her mind, making visible the **thinking process**

✓ The other student is the **listener**, whose main job it is to keep the other student going, asking for clarification, and questioning when there is a =n error (without pointing out the error)

✓ Involves **meta cognition**, and the listener asks the questions that one should ask oneself while doing a problem
Figures 1 through 4 form a series that changes in a systematic manner according to some rule. Try to discover the rule and choose from among the alternatives A - E the figure that should occur next in the sequence.
TAPPS Example 2

In a different language \textit{luk eir lail} means “heavy little package”, \textit{bo lail} means “heavy man”, and \textit{luk jo} means “pretty package”. How would you say “little man” in this language? (Wimby and Loachhead, 1986, p. 121)