

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.**  Determine 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



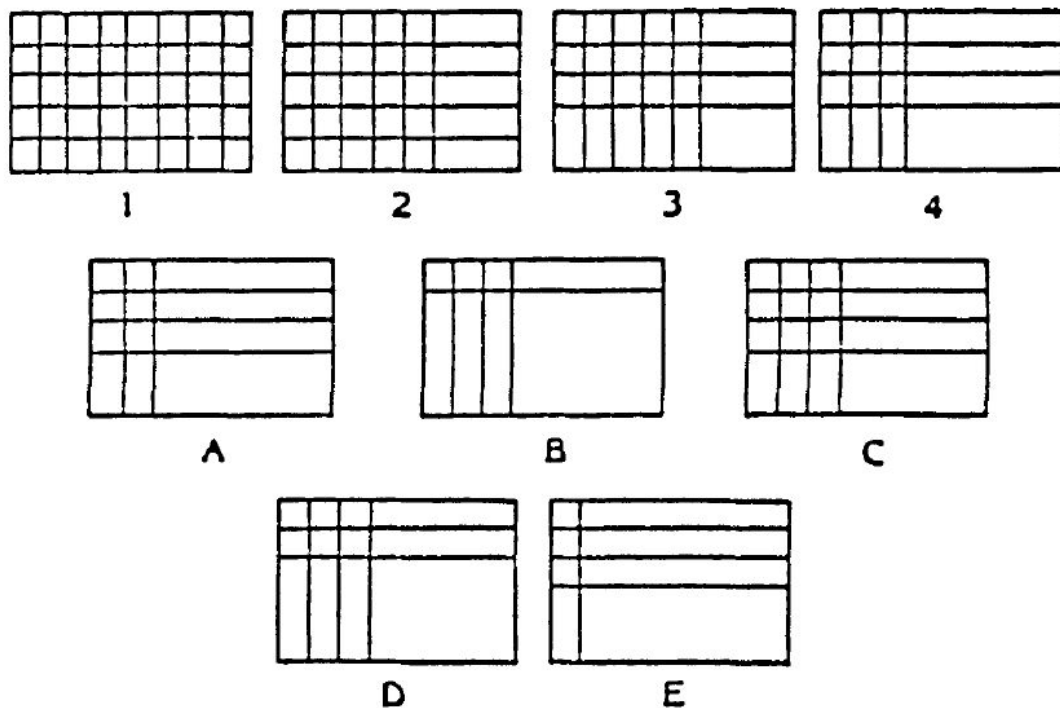
- ✓ Students often jump into the problem computation without taking the time to extract the full information
- ✓ Skills to be practiced:
 - Assign variables to unknown quantities
 - Identify what the problem asks you to do
 - Translate the English sentences into mathematical equations

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

TAPPS Example 1

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 **luk eir lail** means “heavy little package”, **bo lail** means “heavy man”, and **luk jo** means “pretty package”. How would you say “little man” in this language? (Wimby and Loachhead, 1986, p. 121)