

WORD PROBLEM STRATEGIES

Before you begin:

You may wish to review the Information Sheets: *TRANSLATING ENGLISH TERMS INTO ALGEBRAIC SYMBOLS*, *CREATING ALGEBRAIC EXPRESSIONS OUT OF WORDS*, or *DEFINING THE VARIABLE*

Why Learn to Solve Word Problems

In real life, no one is going to give you a list of fractions to simplify, decimals to add or equations to solve. Instead, both at work and at home, you will face situations that require mathematical thinking. How do you double a recipe? How much paint do you need for a room? How much fertilizer to cover the lawn? How much will it cost to build a particular product? What should the price of that product be?

How to Solve Word Problems

- Step 1: Understand the problem.
Read the problem carefully, several times if necessary. Consider imagining the situation, drawing a picture, using a chart, crossing out unnecessary information, or anything else that will help you organize and understand the information given.
- Step 2: Find the question or what you are to do.
It may be helpful to restate the question in your own words. What is it asking for?
- Step 3: Anticipate what the answer will look like.
Estimate the result. Do you expect the answer to be large? Small? Whole Number? Fraction or ratio? Decimal? Will you need to round? To how many places? What kind of label will you put on the answer? Apples? Pounds? Hours? What?
- Step 4: What information do you need to answer the question?
Pick out what you need from the problem but also remember not everything may be written into the problem. For instance, you may need a formula.
- Step 5a: What strategies can you use to answer the question?
More than one possibility may exist. Consider the particular chapter/section you are studying. Does it suggest a strategy? How would you deal with a similar situation if you needed to do this outside of class? Your teacher may expect you to use a particular approach but you can use other methods to understand the process and check your answer.
- Step 5b: Is this a single or multi-step problem?
What operations (+, -, \times , \div , etc.) will you use? In every word problem, *something is equal to something else*. Identify what those equal quantities are and you can set up an equation.
- Step 6: Do the math, *neatly*.
Sloppy and careless work leads to mistakes.
- Step 7: Check your answer. **Do not skip this step.**
Did you answer the correct question? Make sure the answer is in the correct units (i.e. feet, pounds). Use your common sense: Is your answer logical and realistic? If not, start over with a fresh approach.