

# How To Solve a Tough Math Problem

- 1) What do I know?
- 2) What do I want?
- 3) What can I do?
- 4) Does it make sense?

## Problem Solving Tool Box

- Draw a diagram or picture.
- Act the problem out, step by step.
- Make a systematic list, chart, or table.
- Look for a pattern.
- Simplify the problem. (Try it with smaller numbers.)
- Restate the problem in another way, or look for a related problem.
- Think about "Before" and "After" situations.
- Work backwards.
- Guess and check. (Try something and see if it works.)

# How To Solve a Tough Math Problem

Ask yourself these 4 questions:

## 1) What do I know?

- List the facts or information given in the problem.
- Underline or circle any key words, such as factor, multiple, area, or perimeter.
- Watch out for mixed units!
- Express the facts in math symbols, if you can.

## 2) What do I want?

- Describe the goal, what the problem is asking you to find.
- Underline or circle any key words, such as sum, product, next, or not. (Small words are easy to miss!)
- Express the goal in math symbols, if you can.

## 3) What can I do?

- Combine the given facts. Can you get closer to the goal?
- Try a tool from your **Problem Solving Tool Box**.
- Do one little step at a time.

## 4) Does it make sense?

- When you get an answer, always look back at the original problem one more time. Check 3 things:
  1. Does your answer make sense?
  2. Do you have the correct units (inches,  $\text{cm}^2$ , kg, etc.)?
  3. Can you think of a way to confirm that your answer is right?

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