Approaches

- Write down the problem in your own terms.
- Write down what you know. Write down what you want.
- Think about the type of the answer: is it a number, an algorithm, a function, an equation...?
- Do several examples.
- Do concrete examples.
- Try smaller, related problems.
- If there's something to do, try it. See if it helps.
- Apply wishful thinking: If I had x, I could finish. Can I get x, or something almost as good?
- Consider extreme cases.
- Use your resources such as books from previous courses, online supplements, and judicious internet searches.
- Be persistent.
- Get messy. Make mistakes.
- Work with others.
- Use context: if the problem is assigned in class, it may be related to recent material. If it comes from a text, there may be related problems nearby. If you know an answer exists, that may help you find an answer.

Test Problems

The old boat, fox, rabbit, cabbage problem: You have a boat, a fox, a rabbit, and a cabbage on one side of a stream. You can row yourself and one other item across the stream at a time. You can't leave the fox and the rabbit together, and you can't leave the rabbit and the cabbage together. How can you get everything across?

- 3.1-74.1-5
- 4-5