

# Three Reads

## Purpose

Use this routine to help students make sense of word problems in mathematics.

## Time

5-20 minutes per problem

## Supported Standards

MP1 – Make sense of problems and persevere in solving them.

## Materials

- A word problem that will challenge your student(s). (If working with more than one student, this should be presented in a way that can be easily read by the whole group at once: printed in large font, shared on a screen, etc.)
- A sticky note, scrap paper, or other means of covering up the question part of the problem. (Instructors using a computer display might make two copies of a slide—one with the question and one without.)

## Procedure

This routine is designed for use with students who are building their reading skills, vocabulary, or English language fluency, but it can be useful for any student who wants a systematic approach to solving math word problems. While this is a reading-focused routine, it is designed to help students learn the important parts of a math word problem.

- 1. First Read: Understand the story context.**
  - a. Start with the question part of the problem covered. Display the rest of the word problem to the students and read the problem aloud.
  - b. Ask students, “What is this situation about?” Provide vocabulary support or images to help students understand what is happening in the problem.
- 2. Second Read: Identify Quantities.**
  - a. Continue to keep the question covered. Have a student read the problem aloud or do a group choral reading (students read out loud in unison).

- b. Ask students, “What can be counted or measured?” Do not focus only on numbers, but on anything that can be counted or measured. Record or highlight the quantities, including each number and its unit.
3. **Third Read: Reveal the question and plan solution strategies.**
  - a. Reveal the question and have students reread the problem. Again, ask a student to read aloud or use choral reading.
  - b. Ask students, “What are some ways we might try to figure this out?” Encourage students to outline a plan before jumping into doing any calculations.  
**Variation:** Rather than revealing a question, ask students to come up with several questions that can be answered using the given information and choose one or two of them to solve.
4. **Finally: Students solve the problem.** Give students time to work individually; then, if desired, put them into pairs or bring the group together to finish working. Where possible, have students check their own answers by using alternative solving strategies, estimations, logical reasoning, or peer conversation.

## Example

### Problem:

*Shawn wants to buy a TV worth \$1,500. He can choose one of two payment plans: Plan A requires him to pay \$81.25 per month for two years, and Plan B requires him to pay \$140 per month for one year.*

1. **First Read: Understand the story context.** Read the problem aloud. Ask students, “What is this situation about?” Make sure they understand what a payment plan is and know what “per” means in this context.
2. **Second Read: Identify Quantities.** Have a student read the problem aloud. Ask students, “What can be counted or measured?” Students will likely identify the dollar amounts quickly. Make sure to give them time to notice the different lengths of time as well. Record the quantities with their units as they come up. [\$1,500, \$81.25, \$140, two years, one year, two payment plans, one TV.]
3. **Third Read: Reveal the question and plan solution strategies.** Have students read the problem one last time, before revealing the question: *What is the difference between the total cost of Plan A and Plan B?* Ask students, “What are some ways we might try to figure this out?” Encourage students to outline a plan before jumping into doing any calculations. For example, a student might plan to multiply the number of payments by the amount of the payments and then subtract the two totals. Another student might make a table or perform repeated addition to find the totals and then compare them.
4. **Finally: Students solve the problem.** Give students time to work individually; then, if desired, put them into pairs or bring the group together to finish working. Where possible, have

## Tutoring Routines

students check their own answers by using alternative solving strategies, estimations, logical reasoning, and/or peer conversation.

More detail, including a walk-through with a sample problem, can be found on the [Illustrative Mathematics website](#).

A description of the routine variation where students develop their own questions is found on the [San Francisco Unified School District Mathematics Department website](#).