

Feb. 3, 2009

Using Tiles to Solve Word Problems H.O.T. LESSON

Grade Level and Course: 9th Grade Algebra I

Time Frame: One Class Period or 66 Minutes

Content Objectives:

- Given a word problem, students will be able to represent the mathematical data by using tiles, a table, a graph, an algebraic equation or any other appropriate method.
- Students will be able to use tiles as a tool to solve a word problem.

Language Objectives:

- Students must make sense of specific vocabulary words in order to complete the exercises: *remainder, fraction, denominator* etc.
- Students will continue to build an idea of what makes a good explanation by using a language frame: Esther is correct/incorrect because _____.
- Students will continue to work on writing complete mathematical explanations using the Complete Math Solution Handout as a guide.

Higher Order Thinking:

- Students will develop explanations to justify their results for the Dollars Prompt.
 - Key Mathematics: Students need to think critically to solve the problem.
- Students will be able to compare and contrast different ways to represent mathematical information (algebraic equation, graph and table).
- Students must, in writing, interpret the meaning of the prompt.

Materials:

- Dollars Prompt
- Math Tiles
- Student handout

Individual Work: (~15 minutes)

- Hand out prompts to each student. Give students time to work individually. Let students know that the teacher cannot answer many questions and that they should just try on their own. Tell students to stay put and quiet so that others get the chance to work on the problem.
- Circulate to manage the classroom and encourage students to work on the prompt.
- At this time, pass out the tiles to students. They can leave these on the side.

Pair-Work: (~15 minutes)

- Pair students up before hand. Let students take turns explaining how they tried solving the prompt. When each person is done sharing, each pair can work together in order to complete the prompt using the math tiles.

Whole-Class Discussion on Prompt: (~5 minutes)

- Let pairs share their work with the rest of the class. Let students come up to the board to write their different methods (tables, algebraic equations, graphs, etc). While students are writing on the board, have other students start thinking about how their method was similar and/or different to the methods shown on the board. Let students share their thoughts.