

NOTE: Remind students that you'll be meeting in the computer lab for class tomorrow. Also, either you can bring everyone's spreadsheet (the handout), or you can ask the students to take the sheets home with them tonight and remember to bring them to class tomorrow.

TITLE OF LESSON

Algebra 1 Unit 1 Lesson 23 – Properties of Equality: Reflexive, Symmetric, and Transitive
You Do Speak Math: Creation of the Individual

TIME ESTIMATE FOR THIS LESSON

One class period

ALIGNMENT WITH STANDARDS

California – Algebra 1:

1.0 Students identify and use the arithmetic properties of subsets of integers and rational, irrational, and real numbers, including closure properties for the four basic arithmetic operations where applicable:

MATERIALS

Lesson 23 Homework – Student Page

Lesson 23 Homework Key – Teacher Page

LESSON OBJECTIVES

- To define the properties of equality (reflexive, symmetric and transitive)
 - To demonstrate how these properties are relevant and how they relate to everyday situations.
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EXPLANATION OF LESSON

We will introduce and discuss the reflexive, symmetric, and transitive properties. Examples will be discussed particularly using money. Students will practice reading equations aloud.

FOCUS AND MOTIVATE STUDENTS

- 1) Homework Check – Stamp/initial complete homework assignments. Pass back graded assignments and have students place in folders.
 - 2) **Agenda** – Have students copy the agenda you posted.
 - 3) Group Review – Have students get into groups of 3 or 4 and review their homework. The recorder should write down any question or comments the group has. Come back together as a class and have each group present what they've come up with.
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ACTIVITIES – INDIVIDUAL AND GROUP

1. Introduce and Discuss: Reflexive Property – Introduce and lead a discussion on the reflexive property. This is a good time to bring in identity and uniqueness. The fact that $a = a$ is philosophically a significant thing. Bring into the discussion the identity of each individual as unique and equal to themselves. What in fact does it mean to be equal? What does the $=$ sign imply. Discuss how adding something to one side of the equal sign requires adding to the other.
2. Introduce and Discuss: Symmetric Property – If $a = b$ then $b = a$. Have the students brainstorm examples from their lives. This is also a philosophically significant concept.

3. Introduce and Discuss: Transitive Property. If $a = b$ and $b = c$ then $a = c$. Brainstorm examples. Use money as an example.
 4. **Read Aloud** – Have the students read these properties out loud. Use variables that are meaningful in their lives.
 5. Homework Review – Hand out Lesson 23 Homework. Review the directions and field all questions. If there is time in class, have students get started.
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HOMEWORK

Complete **Lesson 23 Homework**, due tomorrow

GROUP ROLES

Students will be working individually during this class period, unless a student needs help.

DOCUMENTATION FOR PORTFOLIO

None