

Algebra I – More Practice?

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You have been using Discovering Algebra I since September.
Describe how your typical class period flows with new material.

Components in Each Lesson

- ▶ Lesson Objectives: Select those objectives you believe you want to meet by the end of the lesson.
- ▶ Examples: Read the teacher's manual to decide how the examples integrate with the investigation.
- ▶ Investigation: Read the teacher's manual to decide how the investigation needs to be guided. Decide where natural breaking points occur. Think about how the investigation can be brought to closure or connected to additional thinking activities

Components in Each Lesson

- ▶ Exercises: Study the exercises, the analysis of the exercises and decide how you can engage the students best in thinking about several of the activities. Which exercises should be assigned immediately? Which exercises could be better assigned on a follow up day? Which exercises can be used to assess students' understanding of new ideas?

Investigations

- ▶ How are investigations integrated into the lesson?
- ▶ What takes place as the students are completing the investigation?
- ▶ What are the goals for the investigation?
- ▶ How much of the investigation is completed by the students? By the teacher?
- ▶ How much does the teacher need to guide the investigation?
- ▶ How are the investigations brought to closure?
- ▶ What additional type of discussion take place before, during and after an investigation?

Investigations

- ▶ Describe the type of communications takes place during an investigation.
- ▶ What are you able to assess from this communication that you hear taking place?
- ▶ What type of questions are asked during an investigation?
- ▶ Describe what students do at the conclusion of an investigation.

Investigations

- ▶ How are examples used within the class period?
- ▶ Do students see these examples as extensions or applications of the investigation? Explain.

Homework

- ▶ What should be the teacher's goal for a homework assignment?
- ▶ What should be the student's goal for a homework assignment?
- ▶ Should the goals be the same or different?
- ▶ What should a completed homework assignment look like? How do students know this?
- ▶ How should a completed homework assignment connect with the investigation and classroom activities?
- ▶ How important is *communication* when a student completes a homework exercise?
- ▶ What role do graphing calculators play in completing homework assignment?

Assignment

- ▶ Assignments have been classified as Essential, Performance Assessment, Portfolio, Journal, Group, and Review.
- ▶ Describe how you have used these various type of exercises to engage the students in demonstrating their understanding of a new concept.
- ▶ How have you modeled for students what you expect when you assign various exercises?
- ▶ Have you ever showcased an exemplary assignment so other students see what you expect?

Assignment

- ▶ How are these assignments different from your past experience with homework assignment?
- ▶ Have you tried assigning different type of problems for different reasons? Describe your experiences.
- ▶ Have you tried assigning some problems as group problems for a group to complete? Describe your experiences.
- ▶ What type of exercises were you expecting to see in this textbook that are not there? Are those other type of exercises needed? Why or why not?

Expectations

- ▶ What are your expectations when it comes to students completing an assignment or homework assignment?
- ▶ How have these expectations been modeled for the students?
- ▶ How have you demonstrated to the students that you value their work they present in their solutions to assignments or homework assignment?
- ▶ How do students know you value their solutions to the homework assignment?

Assessment

- ▶ Describe how you have used some of the assessment ideas presented from the publisher?
 - Quizzes
 - Tests
 - Constructive Assessment Options
 - Performance Assessments
- ▶ How have you integrated a Scoring Rubric into assessing student work?
- ▶ If students were to look at their graded work, what type of work would a student describe that has value?

Other Forms of Assessment

- ▶ How have you integrated Journals into your class?
 - Good means for students to self-assess
 - Topics to be described can be modified for each class
 - Students have the opportunity to connect past knowledge with new knowledge
 - Ideas can be selected from exercises or end of the chapter suggestions

Notebook

- ▶ What is the role of a notebook?
 - A place to organize newly learned ideas
 - Gather work by lessons to show what a student has learned
 - Investigations should be connected with additional problems the student has tackled
 - Should be individualized to a student's needs

Take Another Look

- ▶ An opportunity to relook at a newly learned concept in a little different way
- ▶ Challenge the students to make new generalizations

More Practice Your Skills

- ▶ Additional problems beyond the Practice Your Skills in the textbook.
 - Provide non-contextual skills practice
 - Provide more complex problems that are broken down into small steps
- ▶ Not necessary to assign an entire Lesson. Can be split up into parts.
- ▶ Worksheet Builder Software can be used to produce additional activities.

Looking at a Lesson

» Chapter 5
Section 1–6

Solving Systems of Equations

- ▶ Check the objectives
- ▶ How will the investigation be introduced and completed?
- ▶ How will the example be integrated?
- ▶ What exercises do the students need to complete in class?
- ▶ What are you expecting in their solutions?
- ▶ Which exercises would be good follow up questions for homework?
- ▶ How could some of the exercises be assigned to be sure students have achieved the objectives of this section?

Solving Systems of Equations Using Substitution

- ▶ Check the objectives
- ▶ How will the investigation be introduced and completed?
- ▶ How will the example be integrated?
- ▶ What exercises do the students need to complete in class?
- ▶ What are you expecting in their solutions?
- ▶ Which exercises would be good follow up questions for homework?
- ▶ How could some of the exercises be assigned to be sure students have achieved the objectives of this section?

Solving Systems of Equations Using Elimination

- ▶ Check the objectives
- ▶ How will the investigation be introduced and completed?
- ▶ How will the example be integrated?
- ▶ What exercises do the students need to complete in class?
- ▶ What are you expecting in their solutions?
- ▶ Which exercises would be good follow up questions for homework?
- ▶ How could some of the exercises be assigned to be sure students have achieved the objectives of this section?

Solving Systems of Equations Using Matrices

- ▶ Check the objectives
- ▶ How will the investigation be introduced and completed?
- ▶ How will the example be integrated?
- ▶ What exercises do the students need to complete in class?
- ▶ What are you expecting in their solutions?
- ▶ Which exercises would be good follow up questions for homework?
- ▶ How could some of the exercises be assigned to be sure students have achieved the objectives of this section?

Inequalities in One Variable

- ▶ Check the objectives
- ▶ How will the investigation be introduced and completed?
- ▶ How will the example be integrated?
- ▶ What exercises do the students need to complete in class?
- ▶ What are you expecting in their solutions?
- ▶ Which exercises would be good follow up questions for homework?
- ▶ How could some of the exercises be assigned to be sure students have achieved the objectives of this section?

Graphing Inequalities in Two Variables

- ▶ Check the objectives
- ▶ How will the investigation be introduced and completed?
- ▶ How will the example be integrated?
- ▶ What exercises do the students need to complete in class?
- ▶ What are you expecting in their solutions?
- ▶ Which exercises would be good follow up questions for homework?
- ▶ How could some of the exercises be assigned to be sure students have achieved the objectives of this section?