Bell Ringer for Algebra I, 10.28.14

None—Try this lesson again this year—put desks in a semicircle

CW/HW: Lesson 3 – 5, p. 826,

 Lesson 3 – 5: 1 – 3, 6 – 8, 10, 11, 14, 16

3 – 5 Special Cases (p. 149)

1. Background

Consider the following division problems, fill in the shapes and answer the questions.

1. $\frac{0}{100}$ = . If this is true, then • 100 = 0. Is that true?

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2. $\frac{0}{0}$ = . If this is true, then • 0 = 0. Is that true? Are there any

other numbers that might work for ?

1. Special Cases

We’ve spent the past few days solving equations with variables on both sides of the equal sign. Each equation has yielded a single solution. Will this always happen? Here’s one student’s work. Finish the problems for her and analyze her answers:

Now, analyze what you’ve solved. What does this mean?

1. 6 ( x – 8 ) = x – 48

Do first few steps

 6x – 48 = x – 48

Now, analyze what you’ve solved. What does this mean?

1. 5 ( x – 8 ) = x + 4 ( x + 15 )

 5x – 40 = x + 4x + 60

*Flip the page*

1. Now solve this equation: 6 ( x + 4 ) = 5x + 24 + x

For part C, go back to the original equation. Plug in your favorite number for *x* and see whether the Left Hand Side equals the Right Hand Side. Then try plugging in 0 for x and see what happens. Then try x = 1. Then try x = –8. Explain what is happening in this problem.

What is the ‘answer’? Explain.

Compare your answer(s) to problems A and B on the opposite page. Write your observations below.

What is the solution to problem A?

What happened to ‘x’ in problem B? Explain what you think happened in a sentence or two.

What is the solution to problem B? Is the final line in the problem true? What do you think that means? Explain.

Compare the answers to problems A, B and C. What makes the solutions different? Be specific and explain your observations in a few sentences.

3 – 5 Variables on Each Side of an Equation (p. 149)

Ideas: 1. Simplify each side of the equation if possible—distribute, collect like terms, etc.

 2. Move variables to one side of the equal sign.

 3. Move numbers to the other side of the equal sign.

 4. Make the coefficient of the isolated variable to equal 1 (e.g. 1x or 1p or 1m).