3-3A Lesson Master

PROPERTIES  Objective C

1. a. What equation is modeled by the diagram below?

   [Diagram of a balance scale with two boxes on each side]

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   b. What two steps can be done on each side of the scale to find out how much a single box weighs?

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   c. If each round object weighs 1 oz, how much does a single box weigh?

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In 2 and 3, tell what was done to each side of the first equation to arrive at the second equation.

2. \(-41 + 5x = 99\)  
   \[5x = 140\]  

3. \(1.6 = 0.02a\)  
   \[80 = a\]  

4. Fill in the blanks to tell what operation should be performed on both sides to solve \(-7u + 61 = 110\).

   First _________ both sides. Then _________ both sides.

5. Write the commands you would enter on a CAS to find the solution to \(2.1 = 2.05k + 8.75\).

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6. In solving \(-6y + 72 = -114\), Linda instructed her CAS to divide both sides by \(-6\).

   a. What result did she get?

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   b. Is this a reasonable first step to solve the equation? If so, use it to solve the equation. If not, explain why.

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7. Tell what was done to each step to solve the equation \(72 - 18t = 864\).

   \[72 - 18t = 864\]  
   \[\rightarrow -18t = 792\]  
   \[\rightarrow t = -44\]  

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