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| **Developing Fluency with Operations** | | | |
| Identifies known and unknown information in a problem  The school pays $186.49, including taxes, to rent a cotton candy machine and all the supplies needed to fill 300 bags.  They can sell each bag for $1.50.  The profit is the money earned from the sales less the costs. If they sell all 300 bags, what is their profit?  “I know the costs, number of bags they will sell, and price they will charge. I need to determine how much profit they will earn.” | Identifies the operation(s) needed to solve the problem  “To determine the money they will earn, I need to multiply the price they will charge by the number of bags they sell. I’m not sure how I’ll then determine the profit.” | Solves problems involving some operations but not others  “The earnings are: 300 × $1.50 = $450.  Now, I know that I need to subtract the costs to determine the profit.  450 – 186.49 = 263.51  The profit is $263.51.  This matches one of the  multiple-choice options,  which is great.” | Solves problems involving all operations  “You asked me about the profit per bag and how much they could charge to earn at least $1 per bag.  To determine the profit per bag,  I can divide the profit by the number of bags.  263.51 ÷ 300 ≈ 88  The profit per bag is about 88¢.  To earn at least $1 per bag, they need to charge at least 12¢ more per bag. That would be $1.62.  Since we don’t use pennies, they could charge $1.65, but I think  it would be easier to make change  if they charge $1.75.” |
| **Observations/Documentation** | | | |
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