Fraction Number Stories

Write a number model with an unknown to represent each problem. Then solve.

SRB
162-165,
190-192

1. Shamaela's full backpack weighed $10\frac{1}{4}$ pounds. Before leaving for school, she added a 1-subject notebook. Now her backpack weighs 11 pounds. How much does the 1-subject notebook weigh?

   a. Number model with unknown: _____

   b. Answer: _____ pound

   c. Does the 1-subject notebook weigh more or less than 8 ounces? _____

   How do you know?

   _____

   _____

2. Carter's empty backpack weighed $1\frac{3}{4}$ pounds. He filled it with a $3\frac{2}{4}$-pound science book, a $\frac{2}{4}$-pound recorder, a $\frac{1}{4}$-pound calculator, and a $1\frac{1}{4}$-pound notebook. How much does the filled backpack weigh?

   a. Number model with unknown: _____

   b. Answer: _____ pounds

   c. What is the weight, in ounces, of each item in Carter's backpack?

   Science book: _____ ounces   Recorder: _____ ounces

   Calculator: _____ ounces   Notebook: _____ ounces

3. Jeyda's full backpack weighs 9 pounds. Ayla's full backpack weighs $2\frac{1}{2}$ pounds less than Jeyda's. How much does Ayla's full backpack weigh?

   a. Number model with unknown: _____

   b. Answer: _____ pounds

   c. What is the combined weight of Ayla's and Jeyda's backpacks in ounces?

   _____ ounces

   How do you know?

   _____

   _____

4 Ethan's full backpack weighed too much. He took out a $\frac{4}{8}$-pound electronic reader, a $2\frac{1}{8}$-pound full bottle of water, and a $\frac{7}{8}$-pound combination lock. Now the backpack weighs $8\frac{5}{8}$ pounds. How much did the backpack weigh before Ethan took out the supplies?

   a. Number model with unknown: _____

   b. Answer: _____ pounds

   c. If the 16 ounces of water in the water bottle weigh 1 pound, what is the weight of the

   water bottle itself? _____ pounds   How many ounces is that? _____ ounces

5 A red, a green, and a pink backpack are hanging on hooks in the classroom. The total weight of the three backpacks is 32 pounds. The red one weighs $9\frac{3}{4}$ pounds. The green one weighs $1\frac{3}{4}$ pounds more than the red one. How much does the pink one weigh?

   a. Number models with unknowns: _____

   b. Answer: _____ pounds

   c. The _____ backpack weighs 12 ounces more than the _____ backpack.
               color   color
   Explain how you know.

   _____

   _____

Try This

6 Sujit is choosing between two silent reading books to carry in his backpack. The 309-page paperback weighs $\frac{1}{2}$ pound. The 341-page hardcover weighs $1\frac{1}{4}$ pounds more. How much does the hardcover book weigh?

   a. Number model with unknown: _____

   b. Answer: _____ pounds

   c. Is the combined weight of the two books more or less than 32 ounces? _____

   How do you know? _____

   _____