Perusing the super deals aisle at the grocery store the other day, I found some salsa. Since Frank loves chips and salsa, I decided to purchase two tubs. Each tub cost $3.49 and held 4 pounds 6 ounces of salsa.

We usually buy 20-ounce jars for $2.29. How much money did I save by purchasing the super deal salsa?

If we don’t finish all the salsa, was it still a good deal?

Extra: Give the unit cost for each of the salsas.

MATH STANDARDS ALIGNMENT:
Perform operations with multi-digit whole numbers and with decimals to hundredths.
Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Mathematical Practices
1. Make sense of problems and persevere in solving them.
2. Construct viable arguments and critique the reasoning of others.
3. Model with mathematics.
4. Attend to precision.

Personal Finance Big Ideas:
Cost/Benefit Analysis

METHOD 1: I NOTICE, I WONDER™
After reading the problem, our group decided to write down everything we noticed.
- Frank loves chips and salsa
- tubs are on sale
- tub costs $3.49
- tub holds 4 pounds 6 ounces
- jar costs $2.29
- jar holds 20 ounces
- she bought two tubs
We know that there are 16 ounces in 1 pound. We converted 4 pounds 6 ounces all to ounces.

(4 x 16) + 6 = 70 ounces

Because she bought 2 tubs we knew that the total number of ounces would be 70 x 2 or 140 ounces.

We wanted to compare that to her regular salsa purchase. We wondered how many jars of salsa that comes in 20-ounce jars would be the same as 140 ounces. We divided 140 by 20 to get:

140 ÷ 20 = 7

Now we just have to figure out the cost of 2 tubs and the cost of 7 jars because they are both 140 ounces of salsa and so we can compare them.

$3.49 • 2 = $6.98
$2.29 • 7 = $16.03

We subtracted to find the price difference

$16.03 – $6.98 = $9.05

They would then save $9.05

Extra: We wanted to find out the cost per unit for each of the two salsas. We divided the cost of the tub by 70 ounces (the amount of salsa one tub holds) to find the cost (in cents) per ounce of the salsa on sale:

3.49 ÷ 70 = .04985714285714 cents per ounce or about 5¢ per ounce

To find the cost per unit of the normal salsa bought in the jar, we divided the cost of one jar of the salsa by 20 ounces (the amount of salsa one jar holds):

2.29 ÷ 20 = 11.45 cents per ounce or about 11.5¢ per ounce
METHOD 2: DRAW A PICTURE
I started by thinking about the two containers of salsa, the tub and the jar. I drew this picture:

![Diagram of two tubs and a jar of salsa]

I knew from the story that she purchased the two tubs and so what I wanted to figure out was how many of the jars would be the same amount of salsa as the two tubs that she bought. The weight of the jar is 20 ounces and to compare I need the weight of each tub in ounces.

There are 16 ounces in 1 lb. Four pounds would be 16 times 4 or 64 ounces then I add the 6 ounces to that and the total weight for the tub is 70 ounces. Since there are two tubs, the total number of ounces for both is 140. I thought about how many 20 ounces I would need to have the same as the tubs.

\[
20 + 20 + 20 + 20 + 20 + 20 + 20 + 20 = 140
\]

Then I just needed to think about how much that would cost.

\[
\begin{align*}
\$2.29 & \quad $2.29 & \quad $2.29 & \quad $2.29 & \quad $2.29 & \quad $2.29 & \quad $2.29 \\
\$3.49 & \quad $3.49
\end{align*}
\]

\[
= \$16.03
\]

I find the difference of the two costs:

\[
$16.03 - $6.98 = $9.05
\]

Buying the two tubs of salsa saved $9.05.
METHOD 3: MAKE A TABLE

My group and I decided to make a chart to keep track of the costs and ounces of each salsa. We started by converting 4 lbs. 6 ounces all to ounces by multiplying 4 by the number of ounces in a pound (16) and then adding that to the 6 ounces:

\[(4 \times 16) + 6 = 70 \text{ ounces}\]

Because they bought 2 tubs we doubled that to make 140 ounces:

\[70 + 70 = 140\]

<table>
<thead>
<tr>
<th>Purchase</th>
<th>Items</th>
<th>Cost/Item</th>
<th>Total Cost</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salsa (Tub)</td>
<td>2</td>
<td>$3.49</td>
<td>2 \times 3.49 = $6.98</td>
<td>140 ounces</td>
</tr>
<tr>
<td>Salsa (20 oz)</td>
<td>7</td>
<td>$2.29</td>
<td>7 \times 2.29 = $16.03</td>
<td>140 ounces</td>
</tr>
</tbody>
</table>

We knew that you had to buy 7 containers of the 20 oz salsa to compare the costs. We used 140 ounces divided by 20 ounces per container and got 7 containers.

We subtracted the total cost:

\[16.03 - 6.98 = 9.05\]

They would save $9.05 by purchasing the tub of salsa from the Super Deals aisle.