

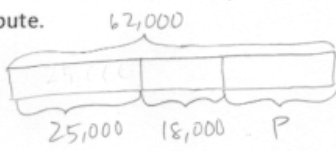
Name Jack Date _____

Directions: Estimate first and then solve each problem. Model the problem with a tape diagram. Explain if your answer is reasonable.

1. On Monday, a farm sold 25,196 pounds of potatoes. On Tuesday, they sold 18,023 pounds. On Wednesday, they sold some more potatoes. In all, they sold 62,409 pounds of potatoes in the 3 days.

a. About how many pounds of potatoes did the farm sell on Wednesday? Estimate by rounding each value to the nearest thousand and then compute.

Monday 25,196 \approx 25,000
 Tuesday 18,023 \approx 18,000
 Total 62,409 \approx 62,000

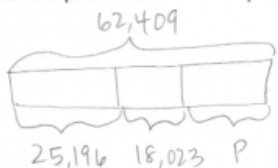


$$\begin{array}{r} 25,000 \\ + 18,000 \\ \hline 43,000 \end{array}$$

$$\begin{array}{r} 62,000 \\ - 43,000 \\ \hline 19,000 \end{array}$$

The farm sold about 19,000 pounds of potatoes on Wednesday.

b. Find the precise number of pounds of potatoes sold on Wednesday.



$$\begin{array}{r} 25,196 \\ + 18,023 \\ \hline 43,219 \end{array}$$

$$\begin{array}{r} 62,409 \\ - 43,219 \\ \hline 19,190 \end{array}$$

The farm sold 19,190 pounds of potatoes on Wednesday.

c. Is your precise answer reasonable? Compare your estimate from (a) to your answer from (b). Write a sentence to explain your reasoning.

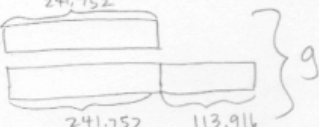
yes, my answer of 19,190 is reasonable. 19,190 rounded to the nearest thousand is 19,000 which was my estimate.

2. A gas station had two pumps. Pump A dispensed 241,752 gallons. Pump B dispensed 113,916 more gallons than Pump A.

a. About how many gallons did both pumps dispense? Estimate by rounding each value to the nearest hundred thousand and then compute.

Pump A $241,752 \approx 200,000$ Pump A 200,000
 Pump B $113,916 \approx 100,000$ Pump B $200,000 + 100,000 = 300,000$
 $\begin{array}{r} 200,000 \\ + 300,000 \\ \hline 500,000 \end{array}$
 Both pumps dispensed about 500,000 gallons.

b. Exactly how many gallons did both pumps dispense?



$$\begin{array}{r} 241,752 \\ + 113,916 \\ \hline 355,668 \end{array}$$

$$\begin{array}{r} 355,668 \\ + 241,752 \\ \hline 597,420 \end{array}$$

 Both pumps dispensed 597,420 gallons.

c. Assess the reasonableness of your answer in (b). Use your estimate from (a) to explain.

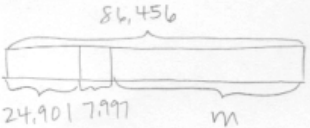
My answer of 597,420 gallons is a little far from my estimate of 500,000, but I know if I rounded to a smaller unit, my estimate would be more exact and nearer to the actual answer. If I rounded to the ten thousands, I would get $240,000 + (240,000 + 110,000) = 590,000$ which is very close to 597,420.

3. Martin's car had 86,456 miles on it. Of that distance, Martin's wife drove 24,901 miles, and his son drove 7,997 miles. Martin drove the rest.

a. About how many miles did Martin drive? Round each value to estimate.

$86,456 \approx 86,000$ $25,000$ $86,000$ Martin drove about
 $24,901 \approx 25,000$ $+ 8,000$ $- 33,000$ 53,000 miles.
 $7,997 \approx 8,000$ $33,000$ $53,000$

b. Exactly how many miles did Martin drive?



$$\begin{array}{r} 24,901 \\ + 7,997 \\ \hline 32,898 \end{array}$$

$$\begin{array}{r} 86,456 \\ - 32,898 \\ \hline 53,558 \end{array}$$

 Martin drove 53,558 miles

c. Assess the reasonableness of your answer in (b). Use your estimate from (a) to explain.

My answer of 53,558 miles is reasonable because it is close to my estimate of 53,000.

