Unit 4, Lesson 18

Standard Algorithm to Add and Subtract

Let's find sums and differences of large numbers.

Warm-up

Estimation Exploration: What's the Difference?

Estimate the difference: $42{,}050 - 3{,}790$.

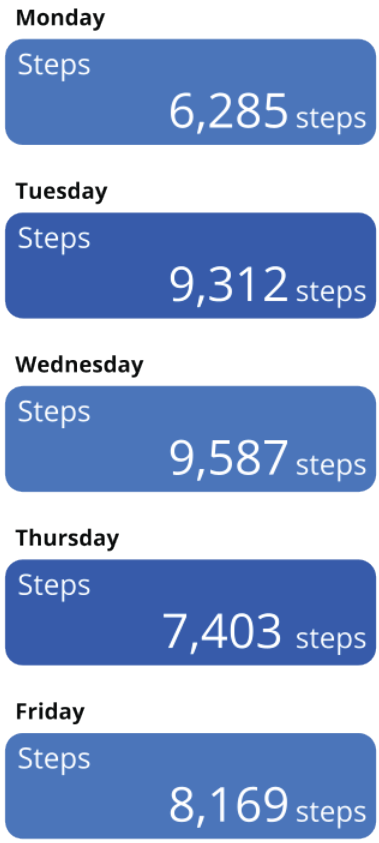
Record an estimate that is:

too low	about right	too high

Activity 1

Weekly Steps

A teacher uses an app on her cell phone to track her physical activity. Here is the data on the number of steps over 5 school days.



For each question, show your reasoning.

1. On which 2 days did she take the most steps? Over those 2 days, how many steps did she take altogether?

2. What is the difference in the number of steps she took on her most active day and on her least active day?

3. Between Wednesday and Thursday, her activity level dropped. How many fewer steps did she take on Thursday than Wednesday?

Activity 2

Steps During the Weekend

The teacher also keeps track of the number of steps she took during the weekend. The data from Saturday and Sunday of that same week are shown.



Here are 2 strategies to compute the total number of steps she took over the weekend.

Strategy A

$$\begin{array}{rrrrrrrrrrrr} & 10{,}000 & + & 7{,}000 & + & 300 & + & 70 & + & 5 & \\ + & 10{,}000 & + & 4{,}000 & + & 0 & + & 20 & + & 4 & \\ \hline & 20{,}000 & + & 11{,}000 & + & 300 & + & 90 & + & 9 & = 31{,}399 \end{array}$$

Strategy B

$$\begin{array}{r} {\scriptstyle 1} \\ 17{,}375 \\ +\;14{,}024 \\ \hline 31{,}399 \end{array}$$

1. Analyze the strategies. Discuss with your partner:
   - What is happening in each strategy?
   - How are they alike? How are they different?

2. Use both strategies to find the difference between the number of steps the teacher took on Saturday and on Sunday.

3. The following week, the teacher took 26,815 steps during the weekdays and 11,403 steps during the weekend. Use both strategies to find the total number of steps she took that week.