

Problem Solving

Solve the problems. Use the *Addition Strategies Menu* in the *Student Guide Reference* section.

1. Romesh and Jason are playing the Digits Game. After four cards, their boards are below. Find each boy's sum using two different methods.

Romesh

$$\begin{array}{r} \boxed{6} \boxed{4} \\ + \boxed{8} \boxed{7} \\ \hline \end{array}$$

Second Method

Jason

$$\begin{array}{r} \boxed{7} \boxed{4} \\ + \boxed{8} \boxed{6} \\ \hline \end{array}$$

2. Kathy and Sara played a game for the largest number. Their boards are below. Find each sum. Explain a strategy for deciding if your answers are reasonable.

Kathy

$$\begin{array}{r} \boxed{8} \boxed{1} \boxed{4} \\ + \boxed{6} \boxed{2} \boxed{3} \\ \hline \end{array}$$

Estimation Strategy

Sara

$$\begin{array}{r} \boxed{1} \boxed{6} \boxed{3} \\ + \boxed{8} \boxed{4} \boxed{2} \\ \hline \end{array}$$

3. Who won Kathy and Sara’s game? Show how you decided who had the largest number.

4. Miguel’s game board looks like the one below. He is trying to find the largest sum. The next card is a 5. Where should he put the 5? Explain your thinking.

$$\begin{array}{|c|c|c|} \hline \square & 6 & 1 \\ \hline + & 7 & \square & 4 \\ \hline \end{array}$$



Check-In: Question 5

5. Miguel’s completed game board is to the right. He used the all-partials method to find the sum.

$$\begin{array}{|c|c|c|} \hline 9 & 6 & 1 \\ \hline + & 7 & 5 & 4 \\ \hline 1 & 6 & 0 & 0 \\ & & 1 & 1 \\ + & & & 5 \\ \hline 1 & 6 & 1 & 6 \end{array}$$

A. Explain an estimation strategy for checking if his answer is reasonable.

B. Check Miguel’s calculations. Do you agree with his solution? Why or why not?