

Use Addition and Subtraction Strategies

A Closer Look at the Digits Game



Self-Check: Questions 1–4

1. Romesh and Jacob are playing the digits game. They need to find the largest sum. Seven numbers were placed on each board.
 - A. Use an estimation strategy to decide who found the largest sum. Show your strategy.

Romesh

$$\begin{array}{r}
 \boxed{7} \boxed{8} \boxed{4} \boxed{1} \\
 + \quad \boxed{6} \boxed{5} \boxed{3} \\
 \hline
 \end{array}$$

Estimation Strategy

Jacob

$$\begin{array}{r}
 \boxed{7} \boxed{4} \boxed{5} \boxed{3} \\
 + \quad \boxed{6} \boxed{8} \boxed{1} \\
 \hline
 \end{array}$$

Estimation Strategy

B. Find the solution for each boy's game board. Use a different strategy for each problem.

| Problem | My Strategy |
|---|-------------|
| <p style="text-align: center;">Romesh</p> $\begin{array}{r} \boxed{7} \boxed{8} \boxed{4} \boxed{1} \\ + \quad \boxed{6} \boxed{5} \boxed{3} \\ \hline \end{array}$ | |
| <p style="text-align: center;">Jacob</p> $\begin{array}{r} \boxed{7} \boxed{4} \boxed{5} \boxed{3} \\ + \quad \boxed{6} \boxed{8} \boxed{1} \\ \hline \end{array}$ | |

2. Shannon is playing for the smallest difference. Here is her game board. Find the difference. Then use estimation to decide if your answer is reasonable. Explain your estimation strategy.

$$\begin{array}{r} \boxed{2} \boxed{5} \boxed{0} \boxed{3} \\ - \boxed{1} \boxed{4} \boxed{9} \boxed{8} \\ \hline \end{array}$$

Estimation Strategy

3. Jessie and Grace played a game for the largest difference.

A. Look at Jessie's game board.
Do you agree with Jessie's solution?
Why or why not?

Jessie's Board

$$\begin{array}{r} \boxed{8} \boxed{1} \boxed{4} \\ - \boxed{6} \boxed{3} \boxed{5} \\ \hline 2 \quad 4 \quad 9 \end{array}$$

B. Look at Grace’s game board. Explain how Grace found her solution.

Grace’s Board

| | | | |
|---|--------------|--------------|--------------|
| | 5 | 10 | 13 |
| | 6 | 7 | 8 |
| - | 4 | 8 | 5 |
| | | | |
| | 1 | 2 | 8 |

C. Who found the largest difference, Jessie or Grace?

4. Jerome and Maya played a game for the smallest difference. Finish the solutions started by Jerome and Maya. Then use an estimation strategy to decide if your answers are reasonable. Circle the winner.

Jerome

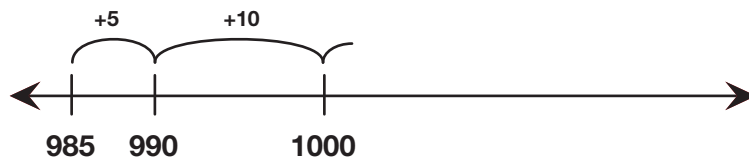
| | | | | |
|---|---|--------------|--------------|---|
| | | 10 | | |
| | 1 | 5 | 0 | 8 |
| - | | 3 | 9 | 2 |
| | | | | |
| | | | | 6 |

Estimation Strategy

Maya

| | | | | |
|---|---|---|---|---|
| | 1 | 0 | 2 | 3 |
| - | | 9 | 8 | 5 |
| | | | | |

Estimation Strategy



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