

Squeeze Play

Name _____

For each problem find three different numbers which will cause the answer to fall in the given range.

1. $38 + \Delta = \begin{array}{|c|} \hline 100 \\ \hline \square \\ \hline 200 \\ \hline \end{array}$

$\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$

2. $63 + \Delta = \begin{array}{|c|} \hline 100 \\ \hline \square \\ \hline 150 \\ \hline \end{array}$

$\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$

3. $125 - \Delta = \begin{array}{|c|} \hline 50 \\ \hline \square \\ \hline 100 \\ \hline \end{array}$

$\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$

4. $\Delta - 53 = \begin{array}{|c|} \hline 50 \\ \hline \square \\ \hline 100 \\ \hline \end{array}$

$\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$

5. $\Delta + 29 = \begin{array}{|c|} \hline 50 \\ \hline \square \\ \hline 60 \\ \hline \end{array}$

$\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$ or $\Delta = \underline{\hspace{2cm}}$

Thinking Cap

Find two numbers whose sum is between 100 and 150.

Find two numbers whose difference is between 20 and 40.

TEACHER NOTES: *Squeeze Play*

Objective: To estimate sums and differences within a given range.

Grade Level: 2-3

Topic: *Estimation*

Using the Activity:

For each exercise students are asked to find three different values that can be added to or subtracted from a given number and have the answer fall within a specified range. Students could complete the activity using guess and check, randomly trying numbers to see if they satisfy the condition. Students who understand the inverse relationship of addition and subtraction could, for example in the first problem, subtract 38 from 100 and 38 from 200 to find the range of missing numbers. An additional strategy would be to have students apply estimation skills to determine the answer. For example in problem one, students should think of $38 + \Delta$ as approximately $40 + \Delta$ to facilitate finding a solution. Students should verify each answer on the calculator. Many answers are possible for each problem. The calculator frees the student from the computation, allowing the student to concentrate on the problem solving process.

Ask students to determine for each exercise the smallest and largest number that satisfies each condition. *Note: Sum falls in the range. The endpoints are not included. (1. 63; 161 2. 38; 86 3. 26; 74 4. 104; 152 5. 22; 30)*

Thinking Cap

Students are asked to find two numbers whose sum is between 100 and 150. Many answers are possible such as 76 and 60. In the second question, they are asked to find two numbers whose difference is between 20 and 40. A possible answer is 55 and 80. Be sure to have students explain how they determined their pair of numbers. An additional challenge, not found on the student page, would be to ask students to find two numbers that satisfy two conditions at the same time. For example, find two numbers whose sum is between 50 and 60 and whose difference is between 5 and 10. A possible answer would be 30 and 24.