Addition and Subtraction as Inverse Operations

Understanding the Topic

Addition and subtraction are opposite operations. When we add, we put numbers together. When we subtract, we take one number away from another. If we know an addition fact, we can use it to find a subtraction fact — and vice versa. This is called inverse operations because one undoes the other.

How Addition and Subtraction Are Inverse

Step 1: Start with an addition fact (like 5 + 3 = 8)

Step 2: Use the same numbers to write the subtraction fact (8 − 3 = 5 or 8 − 5 = 3)

Step 3: Check the relationship — addition makes the total, subtraction brings us back

Step 4: Use this to solve missing number problems

Examples with Solutions

Example 1:

Addition: 6 + 4 = 10

Subtraction: 10 − 4 = 6 or 10 − 6 = 4

Answer: Addition and subtraction are inverse

Example 2:

Addition: 7 + 5 = 12

Subtraction: 12 − 5 = 7 or 12 − 7 = 5

Answer: Addition and subtraction are inverse

Example 3:

Addition: 9 + 2 = 11

Subtraction: 11 − 9 = 2 or 11 − 2 = 9

Answer: Addition and subtraction are inverse

Example 4:

Addition: 8 + 3 = 11

Subtraction: 11 − 8 = 3 or 11 − 3 = 8

Answer: Addition and subtraction are inverse

Example 5:

Addition: 10 + 6 = 16

Subtraction: 16 − 10 = 6 or 16 − 6 = 10

Answer: Addition and subtraction are inverse

Summary Points

- Addition and subtraction are inverse because one undoes the other.
- From one addition sentence, we can make two subtraction facts.
- From one subtraction sentence, we can make one addition fact.
- This helps to check answers and solve missing number problems.
- Understanding this link makes solving problems easier and faster.