# Adding Integers using a Checking Account Analogy – Part 3

The next Activity will use a checking account analogy to make sense of these operations. For the checking account analogy, the first number in the problem represents the current account balance. If the account is overdrawn, the first number is negative; if the account has money, then the first number is positive. Adding a negative number represents a withdrawal of money from the account, as in writing a check. Adding a positive number represents making a deposit into the account.
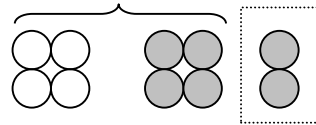
The process of adding corresponds to making entries to the account, either withdrawals or deposits. The result of the problem is the account balance after all the withdrawals and deposits are made.

Example:

$-4 + 6 = ?$
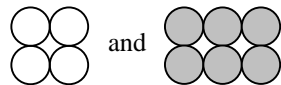
can be rearranged as

This can be interpreted as (–4 + 4) + 2. Removing the zero leaves two gray chips so $-4 + 6 = 2$.

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1. Interpret this chip sequence in terms of a checking account. Use ideas like *withdraw*, *deposit*, *account is overdrawn*, *account has money*.

    This problem represents an account that was $4 overdrawn (–4) and then a deposit of $6 was made. The resulting balance is $2. Or, a withdrawal of $4 was made, followed by a deposit of $6. The net change was $2.

2. Write a sentence for each problem using the checking account analogy.

    a. –4 + 7 =

    The account was four dollars overdrawn and then a deposit of seven dollars was made. The resulting balance is three dollars.

    b. 15 + (–10) =

    The account has fifteen dollars and then a withdrawal of ten dollars was made. The resulting balance is five dollars.

    c. –50 + (–50) =

    The account was fifty dollars overdrawn and then a withdrawal of fifty dollars was made. The resulting balance is one hundred dollars overdrawn.

3. Determine the sum, thinking of the checking account analogy.

85 + (−100) =

The account has eighty-four dollars and then a withdrawal of one hundred dollars was made. The resulting balance is sixteen dollars overdrawn.

4. Imagine that you received a report of transactions, but <u>one digit</u> in each number was smudged (◆) and unreadable. For each of the following, determine whether the result will be positive, zero, negative, or impossible to determine.

a. −67◆3 + 43◆

negative

b. 7◆1 + (−2◆4)

positive

c. ◆37 + (−◆42)

cannot determine

d. −5◆48 + (−23◆)

negative

5. With what combination of numbers will the checking account balance end up positive?

When you deposit more than you withdraw.

6. Do you have an analogy for working these problems that you like better than the checking account? Write it here.