

Warm-up

Nov 19

1) Translate the following to algebraic expressions:

- a) 9 more than a number  $t + 9$
- b) The sum of a number and 7  $x + 7$
- c) The difference between a number and 10  $n - 10$
- d) 13 less than a number  $K - 13$

Let's go over the homework!

1) a number plus 7

$$q + 7$$

2) 7 added to a number

$$a + 7$$

3) the sum of a number and 10

$$x + 10$$

4) A number decreased by 4

$$b - 4$$

5) four less than a number

$$z - 4$$

## Word problems!

Tips:

- Look for specific word use to know what operation to use.

Can you come up with an equation for these??

1. A farmer has 120 cows and buys 30 more. How many cows does he have now?

$$120 + 30 = 150$$

2. Lucy has 45 apples. She gives 12 to her friend. How many does she have left?

$$45 - 12 = 33$$

3. A library had 300 books. They received a donation of 75 books. How many books do they have now?

$$300 + 75 = 375$$

## What about these???

1. Mark has been saving money. He has \$35 less after buying groceries, write an algebraic expression to represent his savings now?

$$w - 35$$

2. A store has apples in stock. They receive 50 more apples. Write an algebraic expression to represent the number of apples in stock?

$$a + 50$$

## Let's do these together

1. Miss Buggie has books on a shelf. She buys 15 more, what is an algebraic expression to represent the number of books?

$$b + 15$$

2. A bakery baked cupcakes 75. They do not know how many they will sell. Write an algebraic expression for the number of cupcakes the bakery has left at the end of the day.

$$75 - c$$

3. Jake has a marbles collection. If he buys 25 more marbles, how many does he have now?

$$m + 25$$

## Try these on your own

1. A class of students is joined by 10 new students. Write an algebraic expression to represent the number of students.  $S + 10$
2. Sarah collected seashells on the beach. After giving 8 to her friend, Write an algebraic expression to represent the number of seashells.  $a - 8$
3. A farmer has cows. If he buys 12 more cows, Write an algebraic expression to represent the number of cows.  $C + 12$
4. The middle school is having a formal. If 30 people leave early, Write an algebraic expression to represent the number of students left at formal?  $f - 30$
5. A garden contains flowers. If 18 flowers are added, write an algebraic expression to represent the number of flowers.  $f + 18$
6. A store has cans of soup. After donating 40 cans to charity, Write an algebraic expression to represent how many cans of soup the store has left?

$$S - 40$$

## Commutative Property

- The **commutative property** is a fundamental mathematical rule that states the **order of addition or multiplication does not affect the result**. This means you can change the order of numbers or variables when adding or multiplying, and the answer will remain the same.

**Example:**

$$3+5=8, \text{ then } 5+3=8.$$

- The commutative property **does not apply** to subtraction or division

$$10 - 3 = 7$$

$$\cancel{3 - 10 =}$$



Use the commutative law to rewrite these:

1.  $a + 7 = 7 + a$

2.  $4 + 3 = 3 + 4$

3.  $9 + 1 = 1 + 9$

4.  $10 + v = v + 10$

5.  $c + m = m + c$

$$a + \frac{1}{2} + 9 + b + 2 + 0.7$$

$$0.7 + a + 9 + \frac{1}{2} + 2 + b$$

# Homework



## Attachments

---

commutative\_law\_addition\_variables\_001qp.1565527678 2.pdf