

# DEV085

## Lesson 2

# Whole Numbers

Addition, Subtraction, Problem Solving with Addition & Subtraction

## Addition

... is the process of finding the \_\_\_\_\_ of two or more numbers. The + (plus) symbol is used to represent addition.

## Addition Terms

\_\_\_\_\_ – numbers being added.

\_\_\_\_\_ – the answer or the total of the numbers.

1.  $8 + 7 = 7 + 8 = 15$

## Commutative Property of Addition

When adding two numbers, changing the \_\_\_\_\_ of the addends will not change the answer.

2.  $4 + 5 + 6 =$

$$(4 + 5) + 6 =$$

$$(\underline{\quad}) + 6 =$$

15

$$4 + (5 + 6) =$$

$$4 + (\underline{\quad}) =$$

15

## Associative Property of Addition

When adding more than two numbers, changing the \_\_\_\_\_ of the addends will not change the answer.

## Examples:

3.  $42 + 321$

4.  $1187 + 50 + 162$

## Rule for Addition of Whole Numbers

1. Write the numbers into vertical columns. Lining up \_\_\_\_\_ place values.
2. Beginning with the column farthest to the right, add each column separately, carrying when necessary.

## Additive Identity Property

The process of adding \_\_\_\_\_ to any number will always result in the same number.

In general: \_\_\_\_\_

## Turn Tape Off And Work Practice Exercises 5 - 8

5.  $108 + 16$

6.  $97 + 409$

7.  $2,375 + 40 + 118$

8. two thousand seven plus  
one hundred seventeen

## Turn Tape Back On For Solutions

## Subtraction

... is the \_\_\_\_\_ or inverse of addition.

## Subtraction Terms

\_\_\_\_\_ – the number you are subtracting from (the top number).

\_\_\_\_\_ – the number being subtracted (the bottom number).

\_\_\_\_\_ – the answer.

9.  $87 - 13$

10.  $47 - 32$

11.  $5,684 - 361$

12.  $78 - 12 \neq 12 - 78$

Subtraction is not \_\_\_\_\_.

12a.  $(36 - 20) - 4 \neq 36 - (20 - 4)$

Subtraction is not \_\_\_\_\_.

## Concept of Borrowing

Borrowing is done by lowering the digit immediately to the left by 1, and then adding 10 to the desired digit.

13.  $483 - 58$

## Rule for Subtraction of Whole Numbers

1. Write the numbers into vertical columns, lining up \_\_\_\_\_ place values.
2. Beginning with the column farthest to the right, subtract each column, borrowing when necessary.

## Turn Tape Off And Work Practice Exercises 14 - 17

14.  $379 - 64$

15.  $683 - 97$

16.  $1005 - 236$

17.  $5000 - 406$

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# Problem Solving Skills

## **Addition Pattern**

Addition follows the pattern of **putting things together** as in

\_\_\_\_\_ or \_\_\_\_\_.

## **Key Words for Addition**

Common key words or phrases for addition include:

\_\_\_\_\_  
\_\_\_\_\_

### **Examples:**

18. A football team has 32 freshman, 22 sophomores, 19 juniors, and 12 seniors. How many players are on the team altogether?
  
  
  
  
  
  
  
  
  
  
19. A family had to replace several appliances in their home. They bought a washer for \$389, a dryer for \$299, a dishwasher for \$429, and a stove for \$689. How much did they spend in total?
  
  
  
  
  
  
  
  
  
  
20. If you have \$945 in your checking account and write a check for \$185, how much do you have left?

## Subtraction Pattern

Subtraction follows the pattern of \_\_\_\_\_ things or \_\_\_\_\_.

Many subtraction situations follow the pattern:

$$\text{Missing part} = \text{_____} - \text{Given Part}$$

## Key Words for Subtraction

Common key words or phrases for subtraction include:

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### Examples:

21. In comparison shopping, Kate found the price for a large screen TV at one store to be \$2129 and on sale at another store for \$1999. What is the difference between these two prices?
  
  
  
  
  
  
  
  
  
  
22. When filled, a dump truck weighs 18,236 pounds. The truck weighs 10,155 pounds when empty. How much does the load weigh?

## Turn Tape Off And Work Practice Exercises 23 - 27

23. The total number of college students in one dorm is 235. If 110 are women, how many are men?
24. A local restaurant took in the following sales for the previous weekend: Friday - \$2945, Saturday - \$3218, Sunday - \$1928.
- What was the total sales for those three days?
  - How much more were Saturday sales than Sunday sales?
25. Twenty years ago Bev and John bought a home for \$37,000. Through the years, the value of the home has increased by \$120,000. What is the home worth today?
26. Mary went shopping and spent \$24 on a blouse, \$42 on a skirt, and \$69 on a jacket. How much did she spend on this outfit?
27. Darren's take home pay is \$440. He has the following bills to pay: credit card \$85 and car insurance \$112.
- How much does he have to pay in total for these bills?
  - After paying these bills, how much will he have left?

**Turn Tape Back On For Solutions**

# Math Study Tips: Importance of Homework

Math is NOT just something you watch or read about. Math is something you DO. That is why homework is assigned in math class. The practice you get from doing problems puts patterns into your long-term memory that makes for better recall on tests or in other courses. The main suggestions for making homework efforts pay off are listed below. Use the space provided to write additional notes.

- ◆ **Do assignments very soon after studying the lesson.**

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- ◆ **Do homework problems completely and carefully.**

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- ◆ **Check your homework.**

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- ◆ **Try doing homework in a study group or with a friend.**

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# Lesson 2: Problem Set

1.  $324 + 1057$

2.  $5009 + 218$

3. Six hundred twelve plus twenty-three thousand five

4.  $4,319 - 2,521$

5.  $5000 - 307$

6. Six thousand five hundred subtracted **from** ten thousand

7. At a local electronics store, Steve priced a computer system at \$2349. At another location he found the same system for \$2199. How much will he save by purchasing the computer from the second store?

8. Tracy is purchasing some bedroom furniture for her new home. The items are priced as follows: bed @ \$579, mattress and box springs @ \$348, nightstand @ \$309, and a chest of drawers @ \$878. How much will the bedroom furniture cost altogether?

9. Dion receives \$165 a week for delivering newspapers and \$40 a week for cutting grass. After paying his younger brother \$25 for helping put the newspapers in plastic bags, how much does he have left?

10. John and Deanna purchased a house in 1988 for \$89,000. They sold it last month for \$122,500. How much more was the house worth when they sold it?