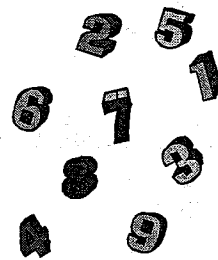


Algebra Basics

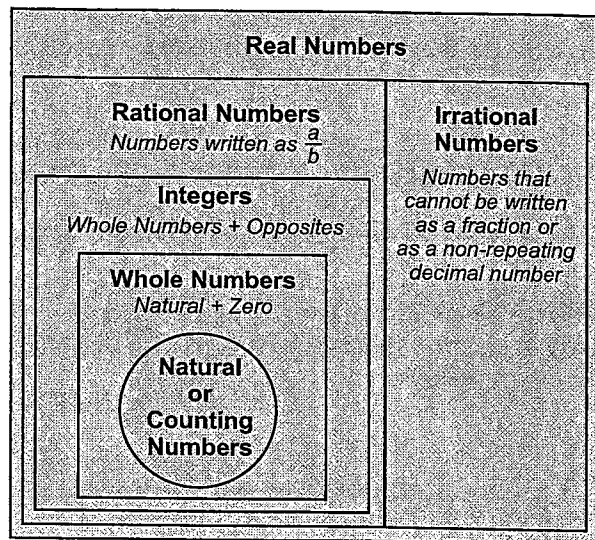
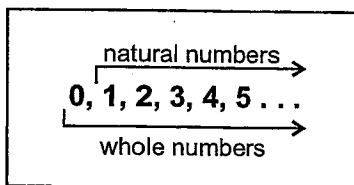
Section 1.1 Classifying Numbers



Math, including algebra, is all about numbers, right? Of course, but did you know there are different types of numbers? They're classified into systems, too. Since algebra problems sometimes refer to these different number systems, it's important that you know what those systems are. For example, if you are asked to find a real number solution, it is helpful to know what a real number is.

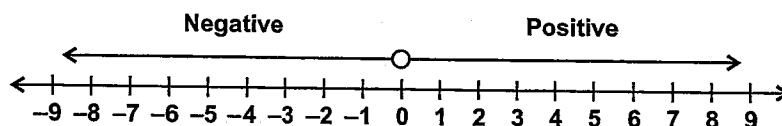
Natural and Whole Numbers

Let's start with natural numbers and whole numbers since they are the most basic. *Natural numbers* are the positive numbers on the right side of zero on a number line. They are also called *counting numbers* because you use them to count. If you include zero with the set of natural numbers, you have *whole numbers*.

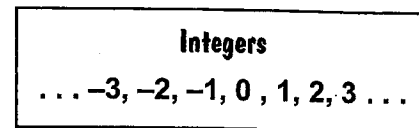


Integers

On a number line, whole numbers are to the right side of zero because they are **positive numbers**. Numbers on the left side of zero are called **negative numbers**.



Negative numbers run infinitely to the left and are the opposites of the positive numbers. **Integers** are whole numbers and their opposites. You might want to think of them as positive and negative "whole" numbers. They *do not* include fractions or decimal numbers, but integers do include zero.



Integers are also called *signed numbers* because a sign is used to indicate the number's direction from zero. The negative symbol (-) indicates that the number is to the left of zero. If a number does not have a sign, it is a positive number (and on the right side of zero on a number line).

Practice 1

Identify the integers by putting a check mark (✓) beside them. Put an × by numbers that are *not* integers.

_____ 1. 14	_____ 2. 3.75	_____ 3. -7	_____ 4. $\frac{3}{4}$	_____ 5. 0
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Section 1.1, continued

Classifying Numbers

Rational Numbers as Fractions

Rational numbers are numbers that can be written in the form $\frac{a}{b}$, where $b \neq 0$. In other words, rational numbers can be expressed as one integer divided by another.

$\frac{a}{b}$ ← Numerator
← Denominator

Fraction Review

You probably recognize fractions as one number written over another number. The top number of a fraction is called the numerator, and the bottom number is called the denominator. (*Denominator* starts with “d,” so remember “d” is “down.”)

Hopefully, you also remember that a fraction represents division. The fraction bar is the same as a (\div) symbol, so a fraction is another way to represent division.

When you divide any number by one, it doesn't change that number. Since any integer can be written as a fraction with “1” as the denominator, all integers are rational numbers.

All Integers are Rational Numbers

$$5 = \frac{5}{1} \quad -2 = \frac{-2}{1}$$

Caution: If the numerator or denominator of a fraction is not an integer, then the fraction may not be a rational number. You'll see some examples in “irrational numbers.”

Rational Numbers as Decimals

Rational numbers can also be written in decimal form. You just do the division. Fractions written with integers will always convert to decimals that terminate or repeat a pattern of digits.

Decimal Review

To convert a fraction to a decimal number, simply divide the numerator by the denominator. This division is especially easy with a calculator.

If the numerator and denominator of a fraction are both integers, then the decimal number will either terminate or repeat. In both cases, the resulting decimal is still considered a “rational” number, even though it is in decimal form.

A *terminating decimal* means that the number ends with a specific number of digits. If you do the math on 1 divided by 2, you get 0.5. These numbers divide evenly to one decimal place. Three-eighths ends with three digits past the decimal, or three decimal places.

Terminating Decimals

$$\frac{1}{2} = 0.5 \quad \frac{3}{8} = 0.375$$

Section 1.1, continued Classifying Numbers

Repeating Decimals

$$\frac{3}{11} = 0.272727 \text{ or } 0.\overline{27}$$

Square Roots of Perfect Squares

$$\begin{array}{l} \sqrt{4} = 2 \\ \sqrt{0.04} = 0.2 \end{array} \quad \sqrt{\frac{9}{25}} = \frac{3}{5}$$

Repeating decimals repeat a pattern of digits. If you divide **three** by **eleven**, you get a repeated pattern of digits. As you can see, *two* and *seven* repeat in a specific pattern. Rather than write all those twos and sevens, you can show a repeating pattern by putting a bar over the part that repeats.

The **square root of a perfect square** is also a rational number. A perfect square is a number multiplied by itself such as **4** or **25** ($2 \times 2 = 4$ and $5 \times 5 = 25$). The square root of an integer that is a perfect square will give you a whole number. Fractions and decimals can also be perfect squares, but their square roots may result in a terminating or repeating decimal numbers.

If you aren't sure if a number is a perfect square, enter it into your calculator and take the square root. If the result is a whole number, a terminating decimal, or a repeating decimal, it is a perfect square. If not, it is "irrational," but we're getting to that.

Irrational Numbers

Decimal numbers that don't repeat or terminate are called **irrational numbers**. Irrational numbers are non-terminating, non-repeating fractions or the square roots of integers that are not perfect squares.

One of the most well-known irrational numbers is pi (π). The value of π is determined by dividing the circumference of a circle by its diameter.

Mathematicians have taken π to more than a million decimal places without it terminating or repeating.

The other form of irrational numbers is the square root of integers that are not perfect squares. Pick an integer that's not a perfect square, take the square root, and you get an irrational number. To show that irrational numbers don't repeat or terminate (without having to write all the numbers), you decide how many decimal places you want to show and use three dots to stand for the rest.

Fractions formed with irrational numbers are also irrational.

Irrational Numbers

$$\pi = 3.1415926535 \dots$$

$$\begin{array}{l} \sqrt{2} = 1.41421356 \dots \\ = 1.414 \dots \end{array}$$

$$\begin{array}{l} \frac{\sqrt{5}}{2} = \frac{2.2360679 \dots}{2} \\ = 1.1180339 \dots \end{array}$$

Practice 2

Identify the rational numbers by writing an *R* in the blank. Identify the irrational numbers by writing an *I* in the blank. When in doubt, use your calculator to convert a fraction to a decimal or to take a square root.

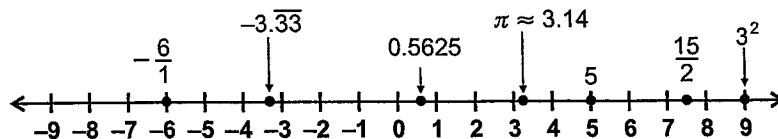
_____ 1. 5	_____ 2. 4.2	_____ 3. 2π	_____ 4. $\frac{1}{4}$	_____ 5. $\frac{-2}{3}$
_____ 6. $\sqrt{0.25}$	_____ 7. $\sqrt{7}$	_____ 8. $\sqrt{9}$	_____ 9. $\frac{\sqrt{2}}{4}$	_____ 10. $\sqrt{\frac{1}{4}}$

Section 1.1, continued

Classifying Numbers

Real Numbers

Real numbers are the combination of all rational and irrational numbers. Real numbers can be represented by points on a number line.



There is actually one more category of numbers called “imaginary numbers,” but you won’t see those in Algebra I. But in case you are curious, they are the numbers you get when you take a square root of a negative number. So, if you are asked for a “real number” solution, you know that the solution can be any number other than one that involves the square root of a negative number.

Practice 3

Answer the following questions by matching to the correct response(s). Each answer choice may be used more than once or not at all.

- | | |
|---|--|
| <p>_____ 1. A fraction that is written with an integer in both the numerator and denominator would also be which kind of number?</p> <p>_____ 2. Integers that are positive are also called what kind of numbers?</p> <p>_____ 3. To calculate the area of a circle, the number pi, π, is used. Areas of a circle are real numbers, but they are also what kind of numbers?</p> <p>_____ 4. Whole numbers and their opposites are called what kind of numbers?</p> <p>_____ 5. Which type of numbers include the square roots of numbers such as 3, 5, and 11?</p> <p>_____ 6. Which type of numbers include ONLY positive numbers and zero?</p> <p>_____ 7. A repeating or terminating decimal number is also what kind of number?</p> <p>_____ 8. The numbers -2, 0, and 0.4 can all be classified as what type of numbers?</p> | <p>A. rational numbers</p> <p>B. integers</p> <p>C. irrational numbers</p> <p>D. whole numbers</p> |
|---|--|

Practice 4

Label the following numbers as Real (R), Rational (RA), Irrational (IR), Integer (I), Whole number (W), and/or Natural number (N).

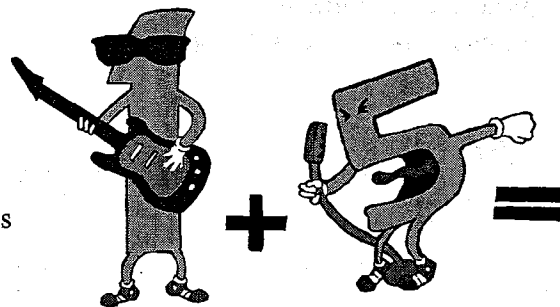
Examples: R, RA, I, W, N 2 R, RA, I -2 R, IR $\sqrt{5}$

_____ 1. $\frac{1}{4}$	_____ 2. $\sqrt{16}$	_____ 3. 2.5
_____ 4. -17	_____ 5. 13	_____ 6. $-\frac{\sqrt{3}}{7}$
_____ 7. $\sqrt{0.25}$	_____ 8. $\sqrt{\frac{9}{16}}$	_____ 9. $2.\overline{33}$

Algebra Basics

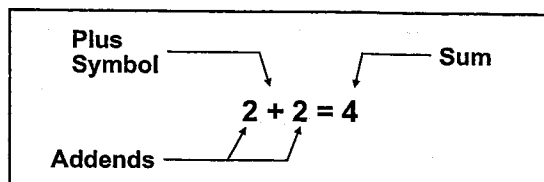
Section 1.2 Math and Algebra Vocabulary

You should be familiar with the vocabulary used in general mathematics and algebra, but here is a quick review.



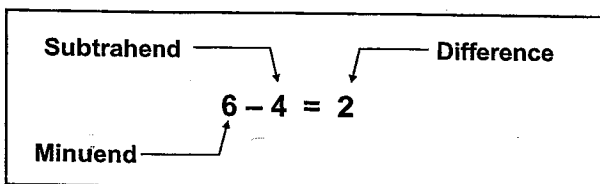
Addition

Combining numbers by adding is called **addition**. The plus symbol (+) means to add. The numbers to be added are called **addends**, and the result is called a **sum**.



Subtraction

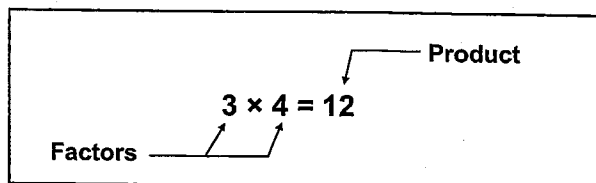
Since elementary school, **subtraction** has meant “take away.” If you have ten pennies and you take away seven pennies, how many pennies do you have? Of course, you have three left!



Just in case you ever need to know, the **subtrahend** (the pennies you take away) is subtracted from the **minuend** (the pennies you have in the beginning), and the answer is called a **difference**.

Multiplication

When two numbers are multiplied, the result is called a **product**. The numbers, themselves, are called **factors**. In this example, the **factors** are *three* and *four*, and the product is *twelve*.



$$3 + 3 + 3 + 3 = 12$$

or

$$4 + 4 + 4 = 12$$

Multiplication literally means to add one factor the number of times of the other factor. In this example, either four 3's are added together or three 4's are added together. But the result is still 12.

Can you see that **multiplication** is a kind of shortcut addition? There's a trick to being able to use the shortcut; you have to know the **Multiplication Facts**. They used to be called **Multiplication Tables**, but whatever you call them, you've got to *know* them. If you don't know that 6×6 is 36, you have to add the sixes together to get the answer. Seems like it would be much less work to learn the facts than to do all that addition. You can decide.

Multiplication Symbols	
$3 \times 4 = 12$	times sign
$3 \cdot 4 = 12$	raised dot
$3(4) = 12$	parentheses

Unlike addition, multiplication has more than one symbol to represent the operation. The most familiar is the times sign (the one that looks like an “x”). But when you start using letters to represent numbers in algebra, the (\times) sign can get a bit confusing. So in algebra, multiplication can also be indicated by a raised dot or by parentheses.

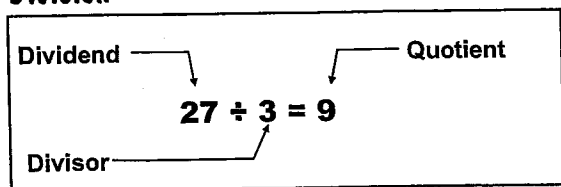
Speaking of algebra, there is one additional way to indicate multiplication. When you have letters and numbers combined, multiplication is sometimes written without using any symbol at all. If you write $3a$, it means $a + a + a$. A number in front of a letter means that the letter is multiplied by the number.

Algebra Multiplication

$$3a = 3(a) = 3 \cdot a$$

Section 1.2, continued Math and Algebra Vocabulary

Division



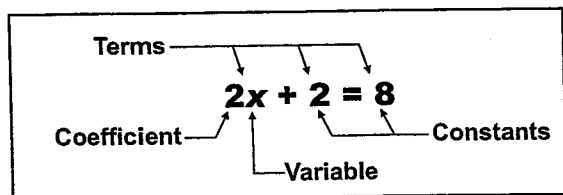
Division is the reverse of multiplication. In division, the number being divided is called the *dividend*, and the number by which you are dividing is called the *divisor*. The result, or answer, is called the *quotient*.

Division also has several symbols that show the operation. The first two you easily recognize as division symbols, but it's the *fraction bar* that you have to remember means division also.

Division Symbols		
$10 \overline{)300}$	$300 \div 10$	$\frac{300}{10}$

Algebraic Expressions and Equations

An **algebraic expression** uses numbers and letters to represent a value. An **algebraic equation** is made up of two algebraic expressions that are equal to one another.



Variable: A letter that represents an unknown value, i.e. x .

Coefficient: A number that multiplies a variable.

Constant: A number that stands alone and is not multiplied by a variable.

Term: One constant, one variable (letter), or more than one variable and/or number multiplied together. Multiple terms are separated by addition or subtraction.

Examples of Algebraic Expressions

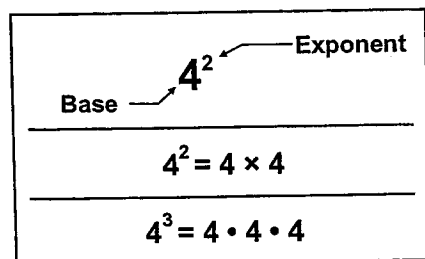
$$x + 2 \quad 4 - m \quad 3a \quad \frac{2xy}{3}$$

Examples of Algebraic Equations

$$x + 2 = 9 \quad 4 - m = 3 + 2m \quad \frac{2xy}{3} = \frac{y}{2x}$$

Powers

Addition has a shortcut called *multiplication*. Rather than adding $4 + 4 + 4$, you can write 4×3 . Multiplication also has a shortcut — it's called using **powers** or **exponents**.



You can rewrite 4×4 as a power by using a *base* and an *exponent*. The expression 4^2 means two fours multiplied together.

The **base** is the *number being multiplied*, and the **exponent** indicates *how many times*.

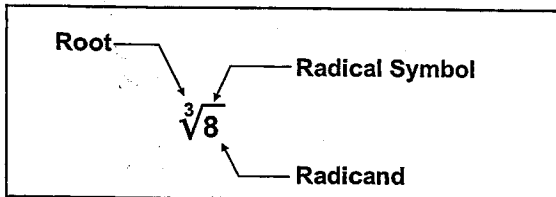
The number 4^3 would mean three fours multiplied together as shown.

Any base raised to the second power is said to be *squared*. Any base raised to the third power is said to be *cubed*. Everything above the third power is read as base to that power. For example, 2^4 would be read, "two to the fourth power" or simply, "two to the fourth."

Section 1.2, continued Math and Algebra Vocabulary

Roots

Roots are the opposite of powers. Roots are written using a radical symbol and a root designation. The number or variable under the radical symbol is called the *radicand*.



What this particular root means is that there is a base when cubed that equals the radicand. In other words, what number, if you cubed it, would be 8?

This one is read as the **cube root of 8**.

If there is no root designated, it means square root.

For any root larger than cube, it is read as the “*n*th root of” where “*n*” is the root in front of the radical. As in the example on the right, if the root in front of the radical is 4, it is read as the fourth root of the radicand, or in this case, the fourth root of 16.

$$\sqrt{4} = \text{square root of } 4$$

$$\sqrt[4]{16} = \text{fourth root of } 16$$

Practice

Match the following expressions or equations to their descriptions.

_____ 1. $10 - 3 = 7$

_____ 2. $4x + 4 = 8$

_____ 3. 4^3

_____ 4. $14 \div 2 = 7$

_____ 5. $4 + 3 = 7$

_____ 6. $\sqrt[3]{7}$

_____ 7. 3^4

_____ 8. $10 \times 3 = 30$

_____ 9. $7x + 4$

_____ 10. $4 \times 3 = 12$

_____ 11. $\sqrt{4}$

_____ 12. $\sqrt{7}$

A. Radicand of 4

B. Cube root of 7

C. Difference of 7

D. Coefficient of 7

E. Exponent of 3

F. Quotient of 7

G. Square root of 7

H. Factors of 10 and 3

I. Base of 3

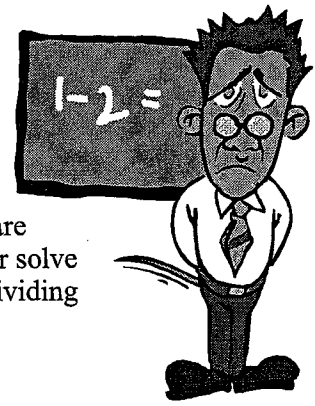
J. Product of 12

K. Sum of 7

L. Algebraic equation

Algebra Basics

Section 1.3 Positive and Negative Numbers

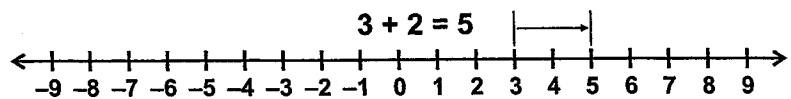


Algebra involves using variables to represent unknown values. Important skills in algebra are simplifying expressions and solving equations. In order to simplify algebraic expressions or solve algebraic equations, you need to know the rules for adding, subtracting, multiplying, and dividing positive and negative numbers.

Adding Numbers

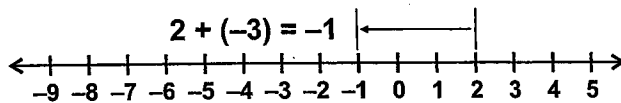
You've been adding numbers since first grade, but let's do a quick review on how number lines can be used. To add positive numbers, start at the first number. Then move from that position to the right the number of units equal to the addend (or second number).

Look at this easy example. Start at 3 on the number line. The second number is 2, so move 2 places to the right. Wherever you end up is the sum. In the case of $3 + 2$, the sum is 5.



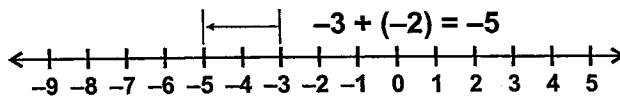
Negative numbers are to the left of zero on the number line. To add a negative number means to move left instead of right.

Example 1: What is the sum of $2 + (-3)$?



Start by finding the first number, 2, on the number line. Now look at the second number, -3 . The negative sign indicates that you move left instead of right. Move three units to the left. The result is -1 .

Example 2: What is the sum of $-3 + (-2)$?



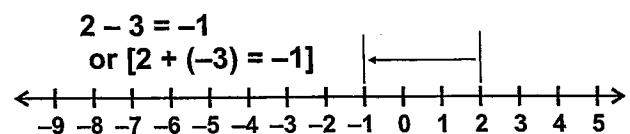
The first number is -3 , so find it on the number line. It is to the left of zero since it is negative. Now add -2 . Again, the negative sign indicates that you move left instead of right. The sum is -5 .

Subtracting Numbers

Subtraction means "take away," and the subtraction symbol ($-$) often is read *take away* or *minus*. When you subtract two positive numbers, you take the second from the first. The subtraction symbol, just like a negative sign, means *move in the opposite direction* or *reverse*.

Example 3: What is the difference of $2 - 3$?

Going back to the number line, the first number is positive, so start at positive 2. The second number is also positive, but the subtraction sign means "reverse." Rather than moving to the right, you move three units to the left.



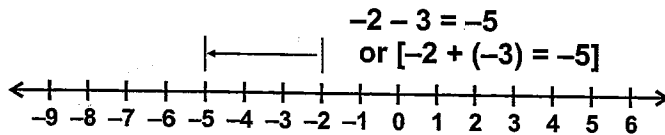
Compare this example to Example 1 above where a negative number was added. Can you see that subtracting a positive number is the same as adding a negative number?

Section 1.3, continued

Positive and Negative Numbers

Subtracting a positive number from a negative number is like adding two negative numbers.

Example 4: What is the difference of $-2 - 3$?



Start at -2 . The second number is positive, but the subtraction sign means “reverse.” Instead of moving to the right, you move three units to the left. The difference is -5 .

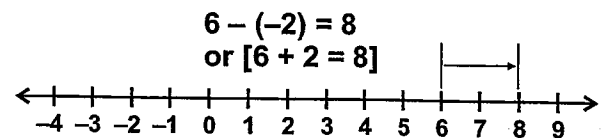
Now, the fun begins. Subtracting a negative number is the same as adding a positive number. Look at the examples below and use the number line to see why.

Example 5: What is $6 - (-2)$?

Start at positive 6.

The second number is -2 , which would normally mean you move to the left. However, the subtraction sign means you *reverse* the direction. When you reverse the move to the left, you move right instead.

The result is positive 8.

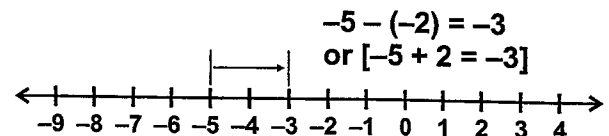


Subtracting two negative numbers is done the same way.

Example 6: What is $-5 - (-2)$?

The first number is -5 , so start there.

The second number is -2 , but not so fast. The subtraction symbol means *reverse*, so go to the right instead. See how this problem is the same as $(-5 + 2)$?



Multiplying Numbers

When you multiply two numbers, you get a **product**. But when the factors have signs, you also have to take them into account in determining the sign of the product. Don't panic. It's not as difficult as you think. There are two simple rules that will help you keep it straight. (Remember that the raised dot is also a symbol for multiplication.)

Rule for Multiplying Numbers with the Same Signs

If signs are the same (+, + or -, -),
the product is positive.

$$2 \cdot 3 = 6$$

$$-2 \cdot -3 = 6$$

Rule for Multiplying Numbers with Different Signs

If signs are different (+, - or -, +),
the product is negative.

$$2 \cdot -3 = -6$$

$$-2 \cdot 3 = -6$$

Section 1.3, continued

Positive and Negative Numbers

Dividing Numbers

The sign rules for division are the same as for multiplication.

Rule for Dividing Numbers with the Same Signs

If signs are the same (+, + or -, -),
the quotient is positive.

$$6 \div 3 = 2$$

$$-6 \div -3 = 2$$

Rule for Dividing Numbers with Different Signs

If signs are different (+, - or -, +),
the quotient is negative.

$$6 \div -3 = -2$$

$$-6 \div 3 = -2$$

Exponents

Since exponents are a shortcut for multiplication, they follow the same rules as multiplication. You already know that a positive number raised to an exponent is always positive, but what about negative numbers?

Negative Number Raised to an Even Power

A negative number raised to an
even power is positive.

$$(-2)^2 = -2 \cdot -2 = 4$$

Negative Number Raised to an Odd Power

A negative number raised to an
odd power is negative.

$$(-2)^3 = -2 \cdot -2 \cdot -2 = -8$$

Practice

Test your understanding of adding, subtracting, multiplying, and dividing positive and negative numbers by working the following problems. Remember to use the correct sign on your answer. Write your answers in the blanks.

1. $9 + 5$ _____	2. $-4 + 7$ _____	3. $-2 + (-1)$ _____	4. $10 + (-3)$ _____
5. $2 - 9$ _____	6. $8 - (-6)$ _____	7. $-6 - 4$ _____	8. $-7 - (-9)$ _____
9. $-9 \cdot -8$ _____	10. $-1 \cdot 4$ _____	11. $-4 \cdot -4$ _____	12. $2 \cdot -12$ _____
13. $-8 \div -4$ _____	14. $81 \div 9$ _____	15. $-64 \div 8$ _____	16. $25 \div -5$ _____
17. $(-5)^2$ _____	18. $(-3)^3$ _____	19. $(-2)^4$ _____	20. 4^3 _____

Algebra Basics

Section 1.4 Substitution Principle



Another important skill in algebra is substituting values for variables to simplify an expression or to check a solution for an equation. The **substitution principle** says that if two quantities are equal, then one quantity can be substituted for the other quantity. If you know the value of a variable, you can substitute or replace the variable with that value.

Substitution Principle

If two quantities are equal, then one quantity can be substituted for the other quantity.

Simplifying Expressions

Let's look at some examples when you would use the substitution principle to simplify expressions.

Example 1: Simplify the following algebraic expressions when the value for $a = 3$ and the value for $b = -1$.

$$a + b \quad a - b \quad ab \quad \frac{a}{b}$$

To solve problems like these, simply substitute the number 3 for the value of a and substitute -1 for the value of b as done below.

$$a + b \rightarrow 3 + (-1) \rightarrow 2$$

$$ab \rightarrow 3(-1) \rightarrow -3$$

$$a - b \rightarrow 3 - (-1) \rightarrow 4$$

$$\frac{a}{b} \rightarrow \frac{3}{-1} \rightarrow -3$$

Example 2: If a is a real number greater than 2, and $b = a$, which expression has the GREATEST value?

$$a + b \quad a - b \quad ab \quad \frac{a}{b} \quad a^b$$

To solve a problem like this one, pick a number greater than 2 and substitute in that value. For example, let's say $a = 3$. Since $b = a$, b is also 3.

$$a + b \rightarrow 3 + 3 \rightarrow 6$$

$$a - b \rightarrow 3 - 3 \rightarrow 0$$

$$ab \rightarrow 3 \cdot 3 \rightarrow 9$$

$$\frac{a}{b} \rightarrow \frac{3}{3} \rightarrow 1$$

$$a^b \rightarrow 3^3 \rightarrow 27$$

The answer is a^b . It gives the greatest value. Can you see that this would be true for any number greater than 2?

Section 1.4, continued
Substitution Principle

Practice 1

Simplify the following algebraic expressions for the values of $x = 2$, $y = -4$, and $z = -1$.

_____ 1. $5 - x$	_____ 2. xy	_____ 3. $y + z$	_____ 4. $x - y$
_____ 5. yz	_____ 6. $z - x$	_____ 7. $y - z$	_____ 8. $\frac{y}{x}$
_____ 9. y^x	_____ 10. $x + z$	_____ 11. $\frac{y}{z}$	_____ 12. $\frac{x}{z}$
_____ 13. $7y$	_____ 14. $-9z$	_____ 15. $\frac{16}{y}$	_____ 16. $\frac{y}{-4}$

Practice 2

Match each question below to the algebraic expression that **BEST** answers it. Some questions may have more than one correct answer, so list each one. Some answers will be used more than once, and some may not be used at all.

- | | |
|---|------------------|
| _____ 1. If x is a positive integer, and y is an integer greater than x , which expression will have the LEAST value? | A. $x + y$ |
| _____ 2. If x is a negative integer, and y is an integer less than x , which expression will have the GREATEST value? | B. $x - y$ |
| _____ 3. If x is a negative integer, and y is equal to x , which expression will have a value of zero? | C. xy |
| _____ 4. If $x = 2$ and $y = -2$, which of the following expressions will equal 0? | D. $\frac{x}{y}$ |
| _____ 5. If x is a number less than -2 , and y is equal to x , which of the following expression will have the LEAST value? | E. $y - x$ |
| _____ 6. If $x = 5$ and $y = -1$, which of the following expressions has the LEAST value? | |

Algebra Basics

Section 1 Review

Answer each question below. Darken the circle that represents the correct answer.

1. Which of the following is an irrational number?

- A $-\frac{1}{4}$
- B $\frac{3}{8}$
- C $\frac{\sqrt{3}}{4}$
- D $\frac{\sqrt{25}}{9}$

(A) (B) (C) (D)

4. If x is an integer less than zero and $y = x$, which of these expression has the LEAST value?

- A xy
- B $y - x$
- C $x - y$
- D $x + y$

(A) (B) (C) (D)

2. The number $26\frac{1}{2}$ can be classified as which type?

- A Integer
- B Irrational number
- C Real number
- D Whole number

(A) (B) (C) (D)

5. Which of the following expressions shows the SQUARE ROOT of a number?

- A 4^2
- B $\sqrt[3]{4}$
- C $\sqrt{4}$
- D 4×2

(A) (B) (C) (D)

3. Which of the following is an integer?

- A -8
- B $\sqrt{8}$
- C $\frac{1}{8}$
- D 8.5

(A) (B) (C) (D)

6. If a is a real number greater than 2, and b is greater than a , which of these expressions has the GREATEST value?

- A a^b
- B $a - b$
- C $a + b$
- D ab

(A) (B) (C) (D)

Section 1 Review, continued

7. Subtracting two different negative numbers results in a difference that is

- A always positive.
- B always negative.
- C always zero.
- D sometimes positive, sometimes negative.

(A) (B) (C) (D)

11. Which of the following is true if you raise a negative number to an even number power?

- A The product is negative.
- B The product is positive.
- C The product is equal to one.
- D The product is equal to zero.

(A) (B) (C) (D)

8. Subtracting a negative number is the same as

- A adding a positive number.
- B adding a negative number.
- C subtracting a positive number.
- D subtracting zero.

(A) (B) (C) (D)

12. Which of the following is true if you raise a negative number to an odd number power?

- A The product is negative.
- B The product is positive.
- C The product is equal to one.
- D The product is equal to zero.

(A) (B) (C) (D)

9. Adding two different negative numbers results in a sum that is

- A always positive.
- B always negative.
- C always zero.
- D sometimes positive, sometimes negative.

(A) (B) (C) (D)

13. If $x = -2$ and $y = 5$, what is the value of $y - x$?

- A -7
- B -3
- C 3
- D 7

(A) (B) (C) (D)

10. Subtracting a positive number is the same as

- A adding a positive number.
- B subtracting a negative number.
- C adding a negative number.
- D subtracting zero.

(A) (B) (C) (D)

14. If $x = -6$ and $y = -5$, what is the value of xy ?

- A -30
- B -11
- C 1
- D 30

(A) (B) (C) (D)