MATH

FOR LANGUAGE DEVELOPMENT
BASED ON ALASKA MATH STANDARDS
GRADE 6 • BOOK 2

Sealaska Heritage Institute

UNIT 6

KEY VOCABULARY

Key Vocabulary

ORDINAL	*A number that shows place or position, as in 1st, 2nd, etc.*
CARDINAL	*The number of elements in a set where the items are counted in order, as in 1, 2, 3, 4, etc.*
PROPER	*A fraction in which the numerator is less than the denominator.*

Key Vocabulary

NUMERATOR

The number above the line of a fraction showing the number of parts of the whole. For example, in the fraction 2/3, the numerator 2 means 2 of 3 parts.

DENOMINATOR

The bottom number in a fraction that shows the number of parts the whole is divided into.

LESSONS

Language and Skills Development

LISTENING

Hop the Line

Make a masking tape line on the floor. Have the students stand on the line—their toes touching the masking tape. Have the students listen for a specific word or sentence. Say a number of other words or sentences, eventually repeating the word or sentence you said at the beginning of the round. When the students hear that word or sentence, they must hop to the other side of the line. When the students hop to the other side of the line, they should then turn around and place their toes on the line once again. Repeat this process using a number of different vocabulary words or sentences.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

SPEAKING

Visual Memory

Mount the math vocabulary pictures on the board. The students should look carefully at the pictures. Then, have the students close their eyes. Remove one of the pictures from the board and place it to the side. The students should then open their eyes and identify the "missing picture." Continue in this way until all of the pictures have been removed. Another way to conduct this activity is to do the reverse. In this case, prepare two or three extra sets of vocabulary pictures. Mount a number of pictures on the board. The students should look carefully at the pictures. Then, have the students close their eyes. Add another picture to the board. The students should open their eyes and identify the "new picture." This activity (and the previous form of the activity) may be done in team form. In this case, the first player to identify the new or missing picture wins the round.

Language and Skills Development

READING

Deal

Before the activity begins, obtain two decks of playing cards. Give all of the cards from one deck to the students (if possible, arrange it so that all students have the same number of cards). Mount the sight words on the board. Hold a playing card from the other deck of cards against one of the sight words on the board. The student who has the matching playing card must identify the sight word. When the student has done this correctly, he/she should place that playing card to the side. Continue in this way until a student or students have no playing cards left in their hands.

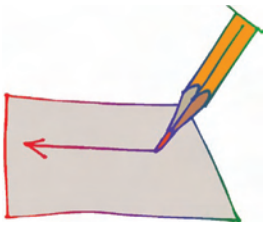
Back Match

Before the activity begins, cut each of the sight words in half. Group the students in a circle. Walk around the outside of the circle, attaching the word halves to their backs. Do not let the students see which word halves they have on their backs. When each student has a word half on his/her back, say "Go." The students must then match themselves together, according to the word halves on their backs. Since the students will not know which word halves they have on their backs, they will have to rely upon one another for assistance. When the students have correctly matched themselves together, have the students in each pair identify the sight word they have "encoded."

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

WRITING



Numbered Illustrations

Mount the vocabulary pictures on the chalkboard and number each one. Provide each student with writing paper and a pen. Call the number of a picture. Each student should write the vocabulary word for the picture represented by that number. Repeat until all vocabulary words have been written. Review the students' responses.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

VOCABULARY PICTURES

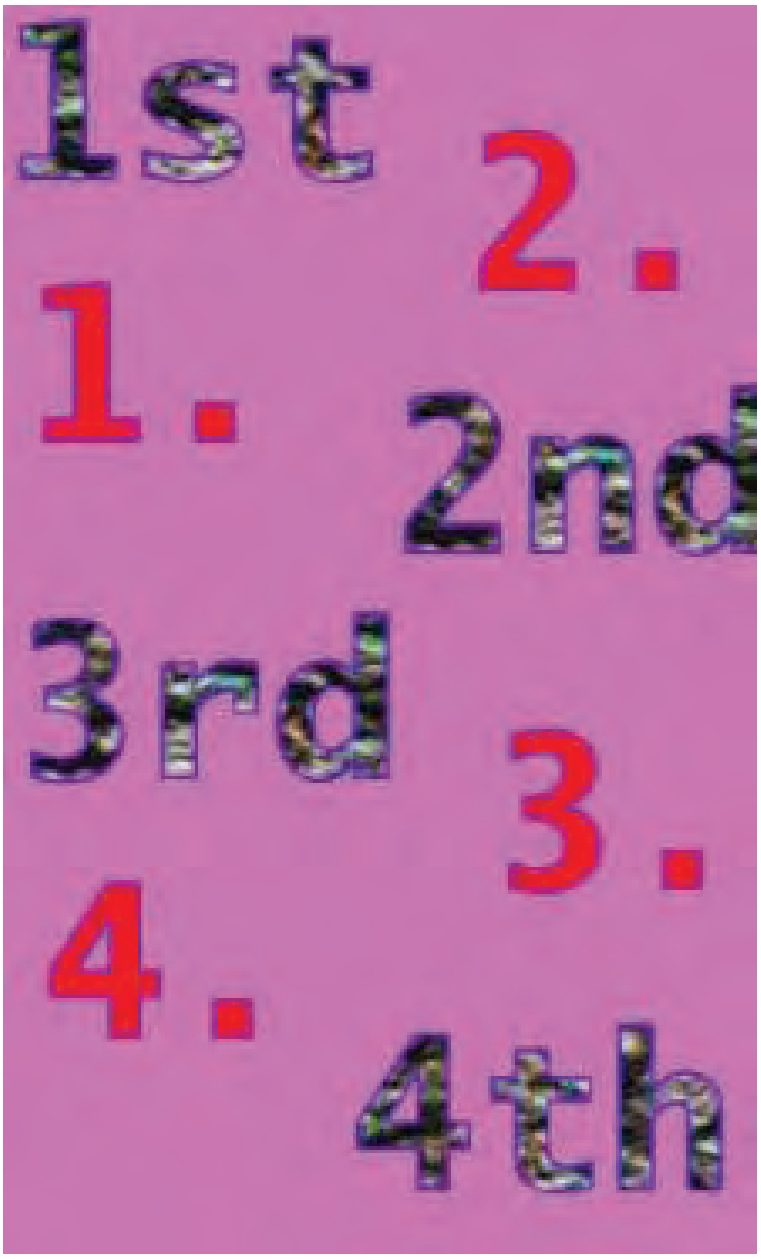

Numbers 1-10
1
one
2
two
3
three
4
four
5
five
6
six
7
seven
8
eight
9
nine
10
ten

CARDINAL


5
16

DENOMINATOR

NUMERATOR


1st
2.
1.
2nd
3rd
3.
4.
4th

ORDINAL

PROPER

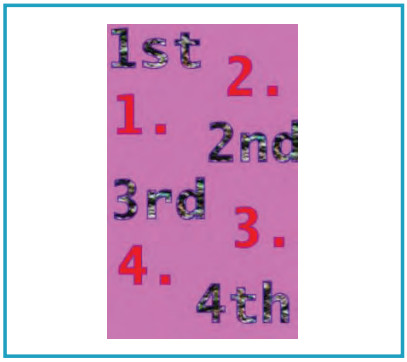
STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Numbered Pictures

Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.

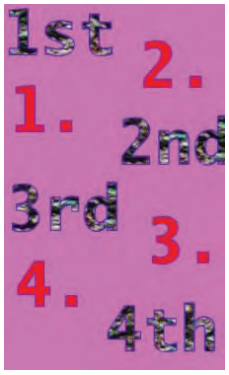
_____ _____ _____



_____ _____

Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.



STUDENT SUPPORT MATERIALS

Reading • Sight Recognition and Encoding

Reading Comprehension

proper

cardinal

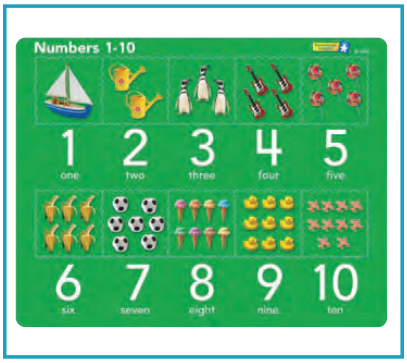
ordinal

denominator

numerator

Sight Words Activity Page

Have the students circle the word for each picture.



ordinal
cardinal
proper
numerator
denominator

ordinal
cardinal
proper
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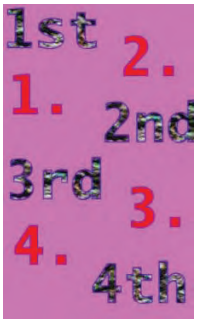
ordinal
cardinal
proper
numerator
denominator

ordinal
cardinal
proper
numerator
denominator



ordinal
cardinal
proper
numerator
denominator

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

or	per
cardi	ator
pro	dinal
numer	inator
denom	nal

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

_____dinal

car_____nal

_____oper

nu_____ator

de_____inator

nom	**or**	**mer**
di	**pr**	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

In a fraction, this shows the number of parts the whole is divided into.	**This is when numbers are rounded off.**	**This is a type of fraction.**
This is used to solve a math problem.	**Third is one of these numbers.**	**This shows the divisibility of a number.**
In a fraction, this shows the number of parts of the whole.	**This shows whether a number is odd or even.**	**These numbers show the number of elements in a set.**

1. ordinal **2. cardinal** **3. proper** **4. numerator** **5. denominator**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1 What does an ordinal number show?

- ❍ It shows whether a number is odd or even.
- ❍ It shows where something is in an order.
- ❍ It shows where to round a number.

2 What are cardinal numbers?

- ❍ They are elements in a set that are counted in order.
- ❍ They are odd and even numerals.
- ❍ They are elements in parentheses.

3 What is a proper fraction?

- ❍ It is a fraction that is more than a whole.
- ❍ It is a fraction that is equal to a whole.
- ❍ It is a fraction that is smaller than a whole.

4 What does the numerator show?

- ❍ It shows the number of parts of the whole.
- ❍ It shows the whole.
- ❍ It shows the number of parts the whole is divided into.

5 What does the denominator show?

- ❍ It shows the number of parts of the whole.
- ❍ It shows the whole.
- ❍ It shows the number of parts the whole is divided into.

Which Belongs?

Have the students write the word that is correct for each sentence.

1. An **ordinal/proper** number tells where something is in an order.

2. **Proper/cardinal** numbers are the number of elements in a set and are counted in order.

3. A **numerical/proper** fraction is smaller than a whole.

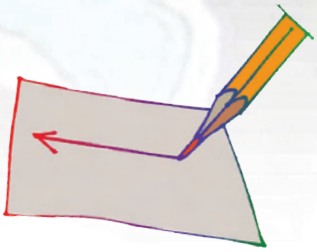
4. The **numerator/denominator** is the number above the line in a fraction.

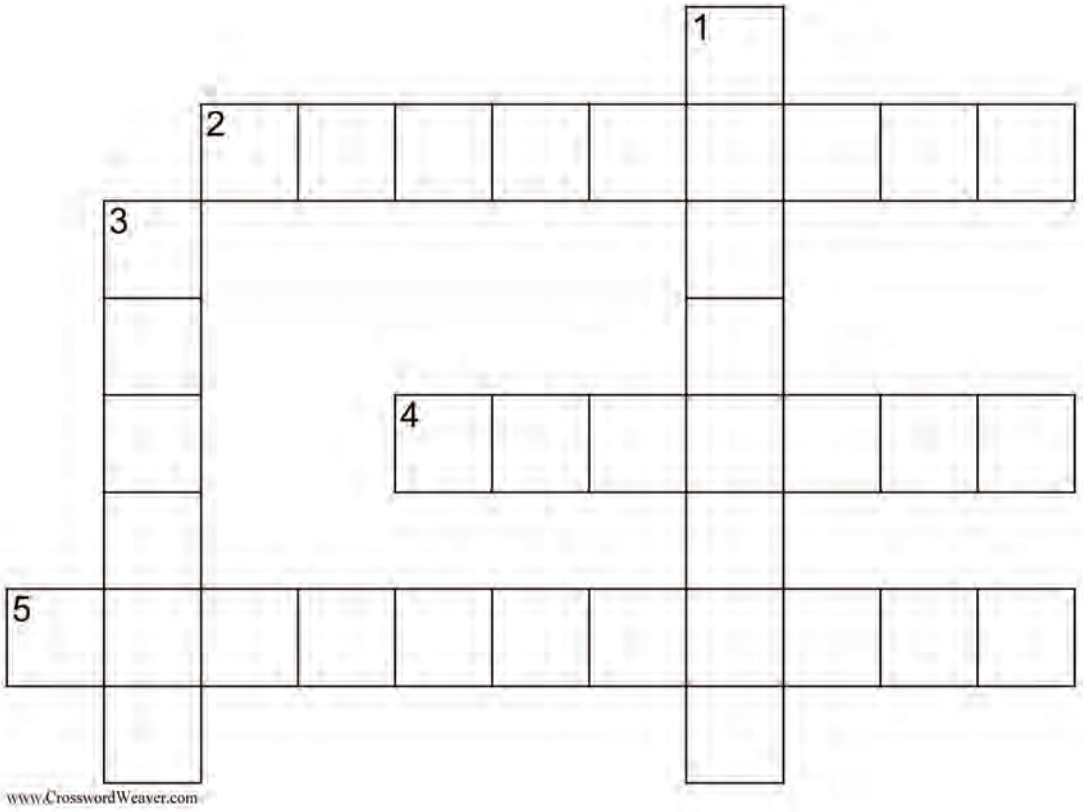
5. The **numerator/denominator** is the number below the line in a fraction.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





ACROSS

2 The number above the line of a fraction that shows the number of parts of the whole.

4 A number that shows place or position.

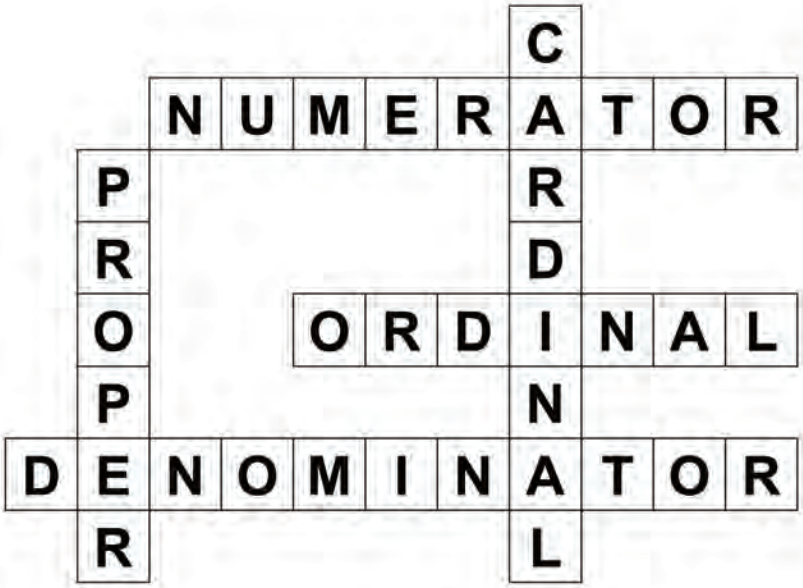
5 The bottom number in a fraction that shows the number of parts the whole is divided into.

DOWN

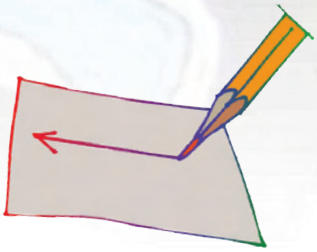
1 The number of elements in a set, where the items are counted in order.

3 A fraction that is smaller than a whole and the denominator is bigger than the numerator.

Crossword Puzzle Answers

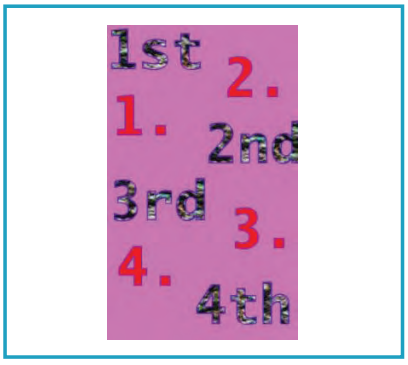


Basic Writing Activity Page



Have the students write the word for each picture.

_____ _____ _____



_____ _____

UNIT ASSESSMENT

Teacher notes: 1). You may wish to circle the numerator in the picture for that key word. This should help the students to associate that graphic with the word; 2). When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 6

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **ORDINAL**.
2. Write the number 2 on top of the picture for **CARDINAL**.
3. Write the number 3 on top of the picture for **PROPER**.
4. Write the number 4 on top of the picture for **NUMERATOR**.
5. Write the number 5 on top of the picture for **DENOMINATOR**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. Ordinal numbers tell the position of someone or something.
2. Cardinal numbers are numbers that are out of order.
3. A proper fraction is bigger than a whole number.
4. The numerator shows the number of parts of the whole in a fraction.
5. The denominator shows the number of parts that the whole is divided into.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

MATH PROGRAM

Unit Assessment Student Pages
Grade 6 • Unit 6

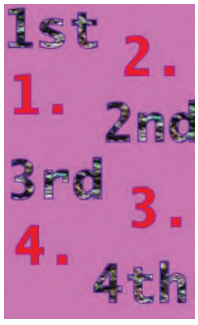
Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**

$\frac{4}{2}$

$\frac{5}{16}$

$\frac{3}{4}$



1. T F

2. T F

3. T F

4. T F

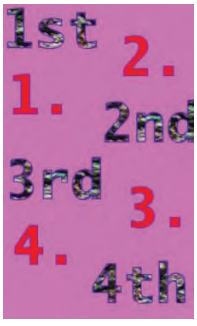
5. T F

ordinal
cardinal
proper
numerator
denominator

ordinal
cardinal
proper
numerator
denominator

ordinal
cardinal
proper
numerator
denominator

ordinal
cardinal
proper
numerator
denominator



ordinal
cardinal
proper
numerator
denominator

or

danal
dunal
denal
danil
denil
dinal
denul
nil
dnil

cardi

nat
net
nil
nel
nal
nul
al
dinal
il

pro

pur
pir
por
or
ir
ar
poor
per
er

nu

mirator
murator
matator
marator
rator
erator
rator
merator
tor

denom

unator
inator
anator
ator
utor
itor
enator
minator
tor

1. Which of these is an ordinal number?
   - ❍ 1, 2, 3, 4, 5
   - ❍ nine
   - ❍ 5th

2. Which of these shows cardinal numbers?
   - ❍ 1, 2, 3, 4, 5
   - ❍ 1st, 2nd, 3rd
   - ❍ 2, 4, 6, 8, 10

3. Which of these is a proper fraction?
   - ❍ 1-3/4
   - ❍ 3/4
   - ❍ 4/3

4. Which of these has a numerator?
   - ❍ 10th
   - ❍ 2/3
   - ❍ 9

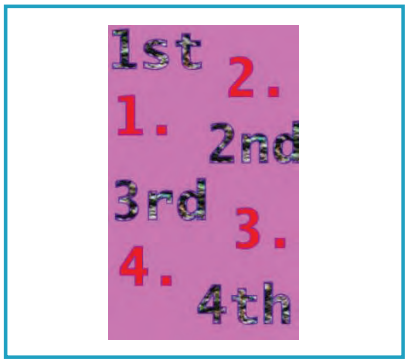
5. Which of these has a denominator?
   - ❍ 5-1/2
   - ❍ 2, 4, 6
   - ❍ twelve


Numbers 1-10
1 2 3 4 5
one two three four five
6 7 8 9 10
six seven eight nine ten


4/2


5/16


3/4


1st
2.
1.
2nd
3rd
3.
4.
4th

ORDINAL

_____

CARDINAL

_____

PROPER

_____

NUMERATOR

_____

DENOMINATOR

_____

UNIT 7

KEY VOCABULARY

Key Vocabulary

PERCENT

Percent relates to the number out of a hundred. The symbol % is used to show percent.

DECIMAL

A decimal relates to a number system based on 10. A decimal fraction is a fraction written as a decimal. For example, 1/2 is 0.5 or 50%.

INTEGERS

An integer is a positive or negative number, or 0, but it is not a fraction.

Key Vocabulary

POSITIVE

Positive integers are numbers that are greater than 0.

NEGATIVE

Negative integers are numbers that are less than 0 but are not fractions. They are shown using the - symbol, as in -20, -32, etc.

LESSONS

Language and Skills Development

LISTENING

Picture Bingo

Provide each student with a copy of the smaller pictures from the Student Support Materials. The students should cut out the pictures. Each student should turn his/her pictures face down on the desk. Then, each student should turn ONE picture face up. Say a vocabulary word. Any student or students who have the picture for the vocabulary word you said face up on their desks should show their pictures. Those pictures should then be put to the side and the students should turn over another picture. The first student or students to have no pictures left on their desks win the round. The pictures may be collected, mixed, and redistributed to the students for the different rounds of the activity.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

SPEAKING

Balloon Volleyball

Group the students into two teams. The two teams should stand, facing one another. Toss a round, inflated balloon to the members of Team One. The members of Team One must then bounce the balloon to the members of Team Two. The players should continue to bounce the balloon back and forth in this way until a team loses the balloon. You may wish to establish the rule that players may not move their feet during the activity. When a team loses the balloon, show them a vocabulary picture and all team members in that team must say the vocabulary word for it. Repeat until players in both teams have responded a number of times.

Picture Jigsaw

Prepare an extra set of vocabulary pictures. Cut each of the vocabulary pictures into four pieces. Mix the cut out pieces together and distribute them to the students (a student may have more than one picture section). When you say "Go," the students should attempt to match the jigsaw sections they have to reproduce the original vocabulary pictures. When the students put the necessary pieces of a picture together, they should identify the picture by its vocabulary word. Continue until all vocabulary pictures have been put together and named in this way.

Language and Skills Development

READING

Pass the Lifesaver

Group the students in a circle. Give each student a toothpick. Place two or three lifesavers over selected toothpicks. When you say "Go," the students should pass the lifesavers around the circle in a clockwise direction until you clap your hands. When you clap your hands, the students should stop passing the lifesavers. The students who are holding the lifesavers on their toothpicks must then identify a sight word you show. Repeat until many students have responded and until all sight words have been identified a number of times.

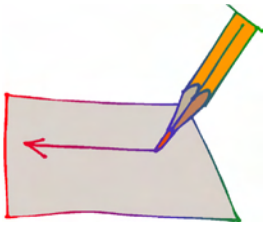
Alphabetical Order

Before the activity begins, prepare one or two extra sets of sight word cards. Mix all of the sight word cards together. Then, divide the sight word cards into two equal decks of word cards. Group the students into two teams. Give the players in each team one of the decks of sight word cards. When you say "Go," the players in each team must then arrange their cards in their correct alphabetical order. The first team to do this wins the round. This activity may be repeated more than once by collecting, mixing, and redistributing the deck of sight word cards to the teams.

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

WRITING



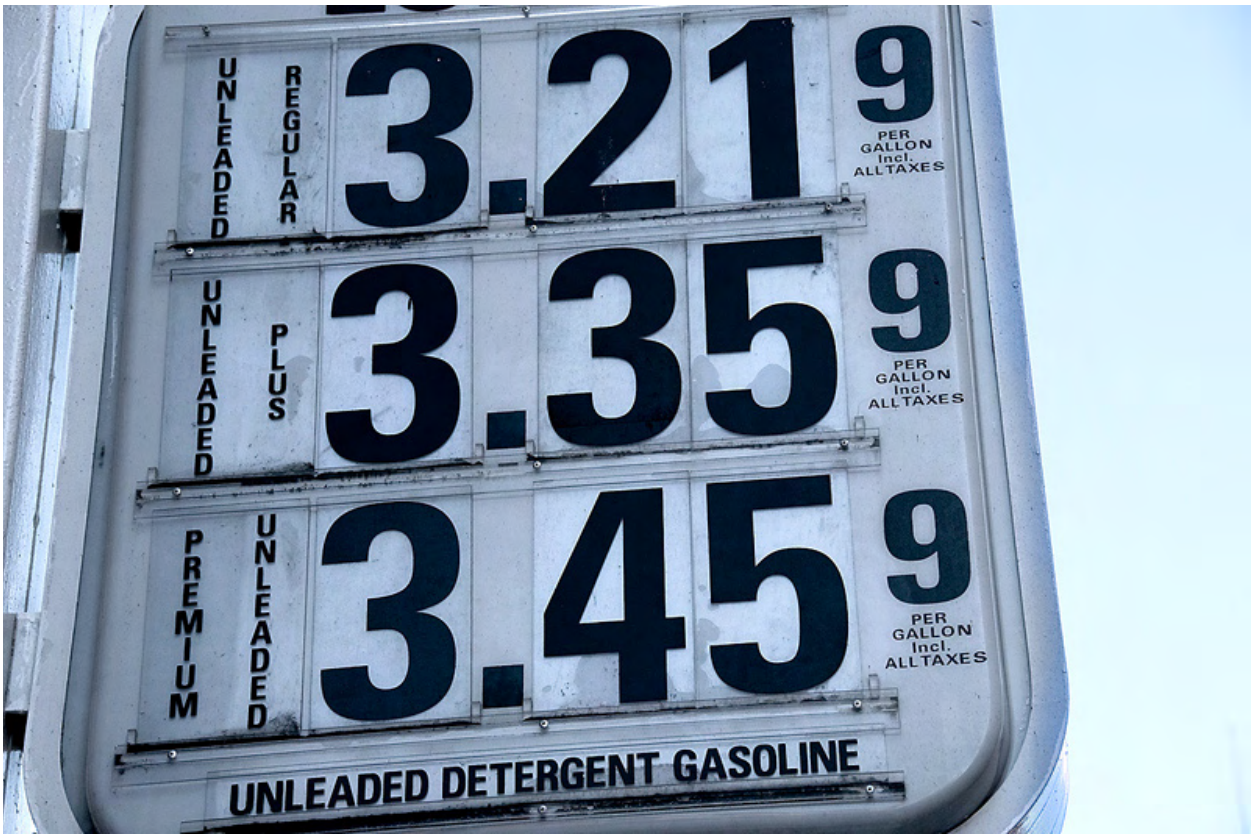
Silent Dictation

Provide each student with writing paper and a pen. The students should watch carefully as you move your lips as though you are saying one of the sight words (do not voice the word). After "lipping" the sight word, each student should write that word on his/her sheet of paper. Repeat this process with other sight words. Afterwards, review the students' responses.

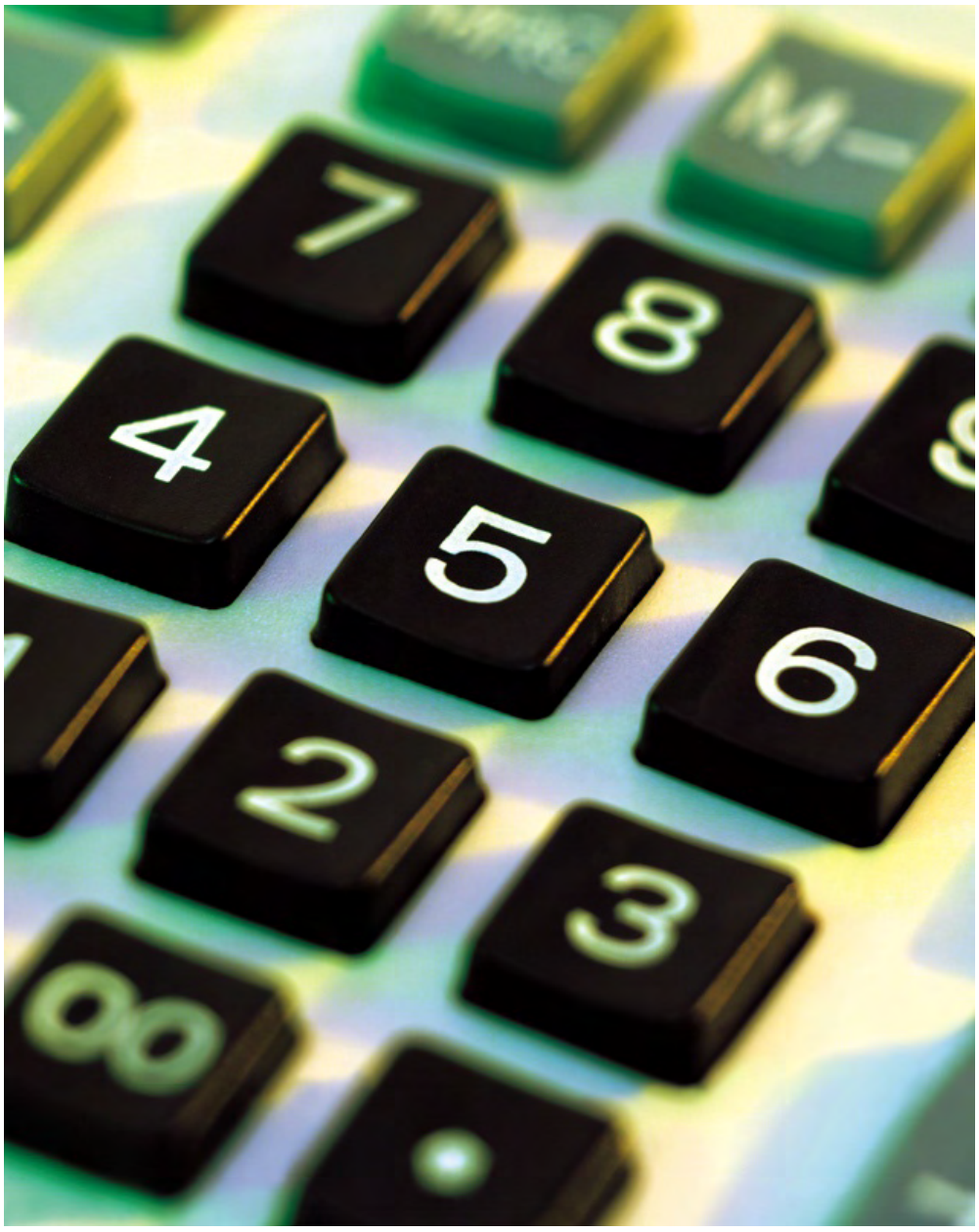
Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

VOCABULARY PICTURES


UNLEADED REGULAR
3.219
PER GALLON Incl. ALL TAXES
UNLEADED PLUS
3.359
PER GALLON Incl. ALL TAXES
PREMIUM UNLEADED
3.459
PER GALLON Incl. ALL TAXES
UNLEADED DETERGENT GASOLINE

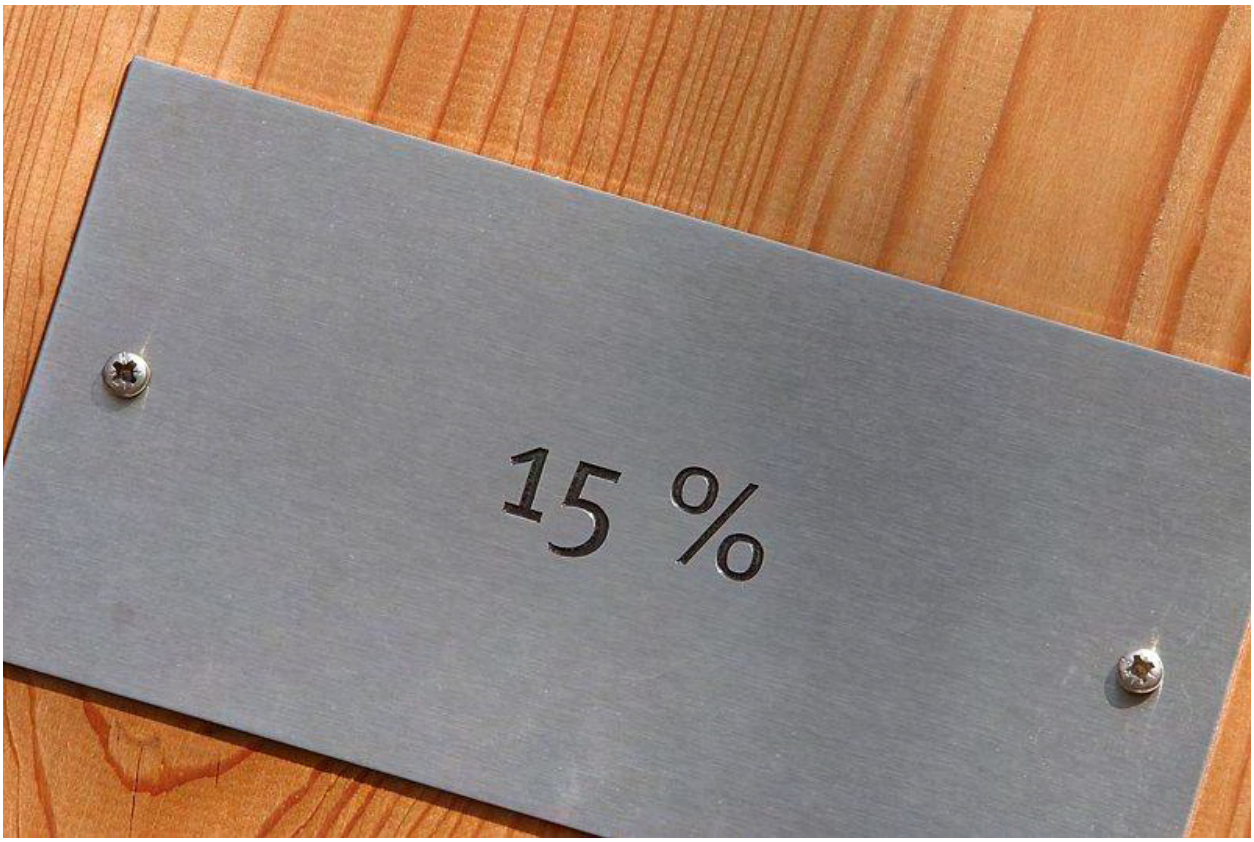
DECIMAL


7
8
4
5
6
2
3
0

INTEGERS


-10%
-15%

NEGATIVE


15 %

PERCENT

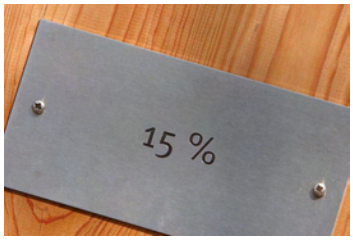
POSITIVE

STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

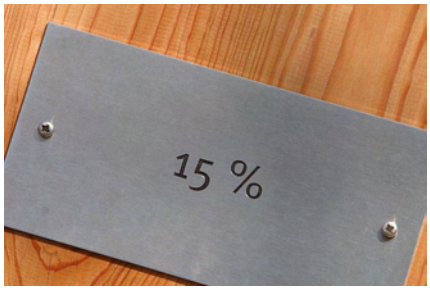
Numbered Pictures

Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.



Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.



STUDENT SUPPORT MATERIALS

Reading • Sight Recognition and Encoding

Reading Comprehension

integers

decimal

percent


negative
positive

Sight Words Activity Page

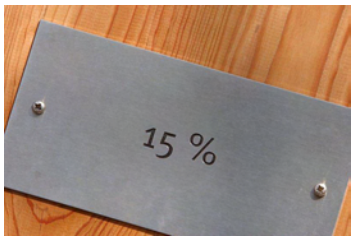
Have the students circle the word for each picture.

percent
decimal
integers
positive
negative

percent
decimal
integers
positive
negative

percent
decimal
integers
positive
negative

percent
decimal
integers
positive
negative



percent
decimal
integers
positive
negative

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

perc	gers
dec	tive
inte	ent
posi	ative
neg	imal

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

p_____cent

de_____mal

in_____gers

po_____tive

_____gative

ne	er	si
te	ci	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

These are the number of elements in a set, inside parentheses.	**This is a fraction that is smaller than a whole and the denominator is bigger than the numerator.**	**These are positive or negative numbers or 0.**
This refers to the number out of a hundred.	**This is the number in a fraction that tells the number of parts of the whole.**	**These are numbers that are larger than 0.**
These are numbers that are smaller than 0 but are not fractions.	**This relates to a number system based on 10.**	**These are odd and even numbers that have been rounded.**

1. percent **2. decimal** **3. integers** **4. positive** **5. negative**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. What does percent tell us?
   - ❍ It tells us which numbers are positive or negative.
   - ❍ It tells us which numbers are odd or even.
   - ❍ It tells us the number out of a hundred.

2. What is a decimal fraction?
   - ❍ It is a fraction written as a fraction.
   - ❍ It is a fraction written as a decimal.
   - ❍ It is a decimal converted to a fraction.

3. What are integers?
   - ❍ They are fractions.
   - ❍ They are odd numbers.
   - ❍ They are numbers that are not fractions.

4. Which of these is a positive integer?
   - ❍ -2
   - ❍ 4
   - ❍ 1/2

5. Which of these is a negative integer?
   - ❍ 10
   - ❍ 2/3
   - ❍ -20

Which Belongs?

Have the students write the word that is correct for each sentence.

1. A **percent/per capita** relates to the number out of a hundred.

2. A **set/decimal** fraction is a fraction, written as a decimal.

3. **Integers/Decimals** are positive or negative numbers, or 0.

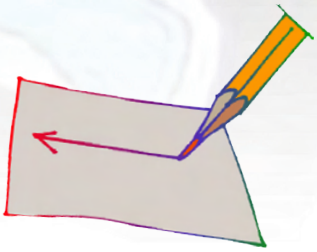
4. **Positive/Negative** integers are greater than 0.

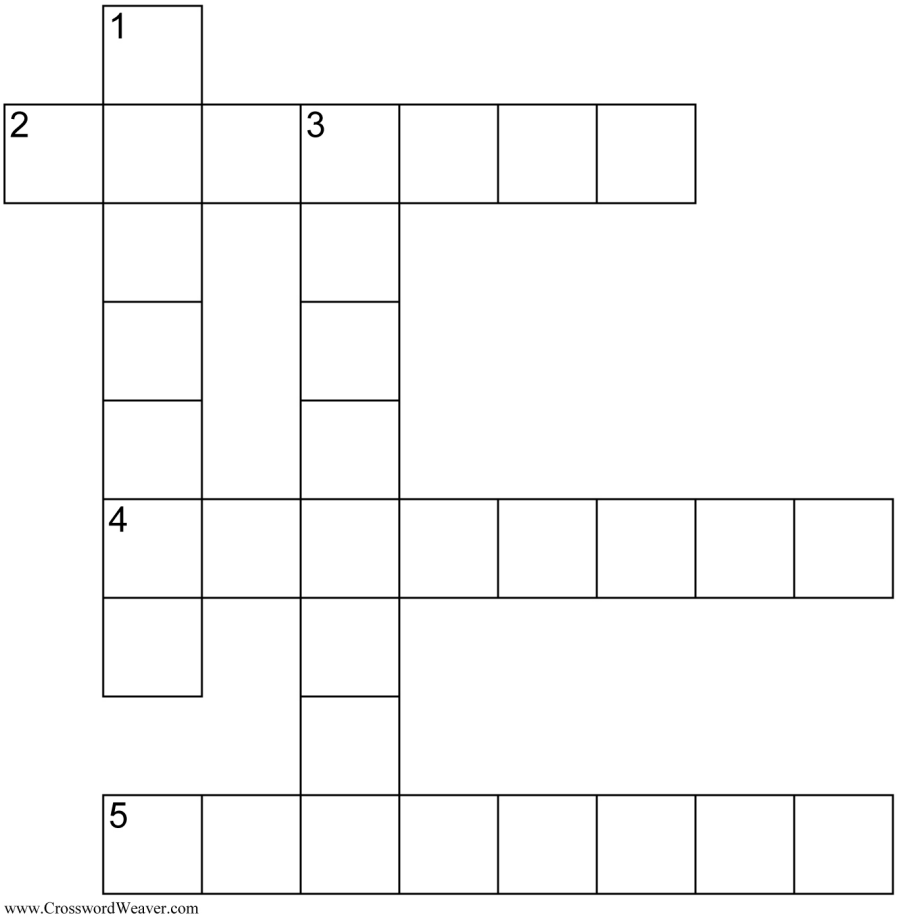
5. **Positive/Negative** integers are less than 0.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





www.CrosswordWeaver.com

ACROSS

2 This relates to a number system based on 10.

4 These integers are numbers that are less than 0 but are not fractions.

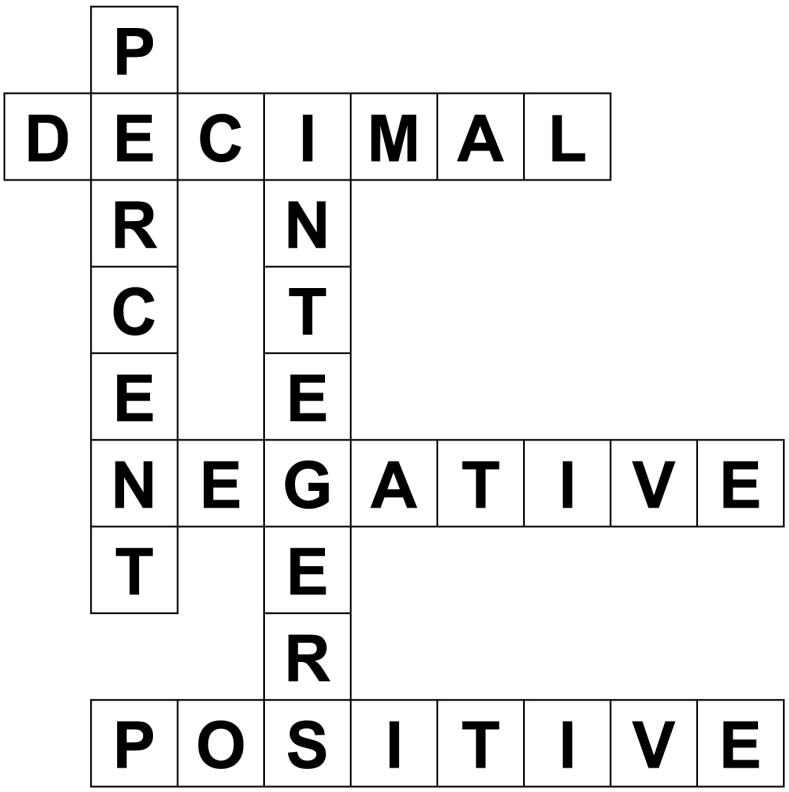
5 These integers are numbers that are greater than 0.

DOWN

1 This relates to the number out of a hundred.

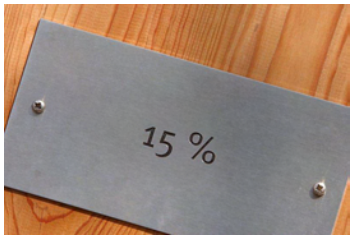
3 These are positive or negative numbers, or 0, but are not fractions.

Crossword Puzzle Answers



Basic Writing Activity Page

Have the students write the word for each picture.



UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 7

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **PERCENT**.
2. Write the number 2 on top of the picture for **DECIMAL**.
3. Write the number 3 on top of the picture for **INTEGERS**.
4. Write the number 4 on top of the picture for **POSITIVE**.
5. Write the number 5 on top of the picture for **NEGATIVE**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. Percent relates to the number out of a hundred.
2. A decimal is a proper fraction with a small numerator.
3. 0 is an integer.
4. Positive integers are numbers larger than 0.
5. Negative integers are numbers larger than 0.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

MATH PROGRAM

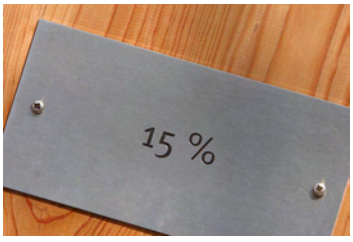
Unit Assessment Student Pages
Grade 6 • Unit 7

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**


3.219
3.359
3.459
UNLEADED DETERGENT GASOLINE


-10%
-15%


15 %

1. T F

2. T F

3. T F

4. T F

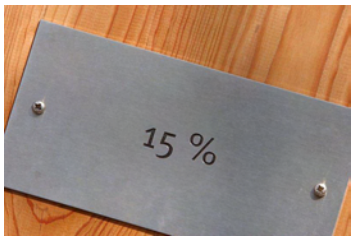
5. T F

percent
decimal
integers
positive
negative

percent
decimal
integers
positive
negative

percent
decimal
integers
positive
negative

percent
decimal
integers
positive
negative



percent
decimal
integers
positive
negative

per

cant
cint
pint
sent
sant
sunt
ent
cent
sint

de

cimal
cumal
camal
comal
imal
umal
omal
emal
cemal

in

tagers
tigers
tugers
tagurs
tigurs
tagirs
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sitave
situve
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gitive
getive
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gative
gatuve
gateve

1. Which of these is a percent?
   - ❍ 5/6
   - ❍ -10
   - ❍ 10%

2. Which of these uses a decimal?
   - ❍ 5%
   - ❍ 5.2
   - ❍ 1-1/2

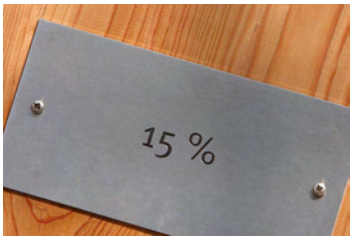
3. Which of these is an integer?
   - ❍ 8
   - ❍ .8
   - ❍ 7-3/4

4. Which of these is a positive number?
   - ❍ 7
   - ❍ -8
   - ❍ 2/3

5. Which of these is a negative number?
   - ❍ 6
   - ❍ -4
   - ❍ 2/3


3.219
3.359
3.459
UNLEADED DETERGENT GASOLINE


-10%
-15%


15 %

PERCENT

_____

DECIMAL

_____

INTEGERS

_____

POSITIVE

_____

NEGATIVE

_____

UNIT 8

KEY VOCABULARY

Key Vocabulary

EXPANDED NOTATION

This is a way of writing numbers to show place value. For example, 125 = 100+20+5.

STANDARD FORM

Standard form is a way of writing down very large or very small numbers easily. $10^3 = 1000$, so $4 \times 10^3 = 4000$. So 4000 can be written as 4×10^3.

EQUIVALENT FRACTIONS

These are fractions that have the same value or amount. For example, 2 halves equal a whole.

Key Vocabulary

MIXED NUMBERS

These are numbers written as whole numbers and fractions. For example, 2-1/2.

PROPERTIES

These are common features or characteristics. For example, odd numbers, shapes, etc.

LESSONS

Language and Skills Development

LISTENING

Flashlight Find

Mount the math vocabulary pictures on the walls, board and windows. Have a student stand in the center of the classroom with a flashlight. Say one of the vocabulary words and the student must find the picture for the vocabulary word you said using the light of the flashlight. This activity may also be conducted in teams. In this case, have two flashlights available. Have a player from each team stand in the center of the classroom. When you say the vocabulary word, each player must attempt to find the correct picture with the light of his/her flashlight. The first player to correctly identify the picture for the vocabulary word you said wins the round. Repeat until all players have played.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

SPEAKING

Picture Jigsaw

Prepare an extra set of vocabulary pictures. Cut each of the vocabulary pictures into four pieces. Mix the cut out pieces together and distribute them to the students (a student may have more than one picture section). When you say "Go," the students should attempt to match the jigsaw sections they have to reproduce the original vocabulary pictures. When the students put the necessary pieces of a picture together, they should identify the picture by its vocabulary word. Continue until all vocabulary pictures have been put together and named in this way.

Hand Tag

Group the students in a circle on the floor. Have the students place their hands on the floor, palms down. Stand in the center of the circle with the vocabulary picture and a flashlight. The object of the activity is to attempt to tag a student's hand or hands with the light of the flashlight. The students must pull their hands from the circle when they think they are about to be tagged. When you eventually tag a student's hand or hands, he/she must then say a complete sentence using the word for a vocabulary picture that you show. Repeat this process until many students have responded.

Language and Skills Development

READING

Right or Wrong?

Mount the vocabulary pictures on the board. Point to one of the pictures and say its vocabulary word. The students should repeat the vocabulary word for that picture. However, when you point to a picture and say an incorrect vocabulary word for it, the students should remain silent. Repeat this process until the students have responded a number of times to the different vocabulary pictures.

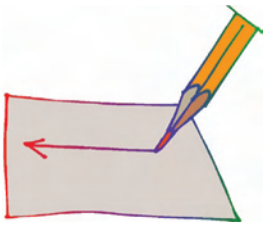
Half Time

Before the activity begins, cut each of the sight words in half. Keep one half of each sight word and give the remaining halves to the students. Hold up one of your halves and the student who has the other half of that word must show his/her half and say the sight word. Repeat in this way until all students have responded. An alternative to this approach is to give all of the word halves to the students. Say one of the sight words and the two students who have the halves that make up the sight word must show their halves. Depending upon the number of students in your class, you may wish to prepare extra sight word cards for this activity.

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

WRITING



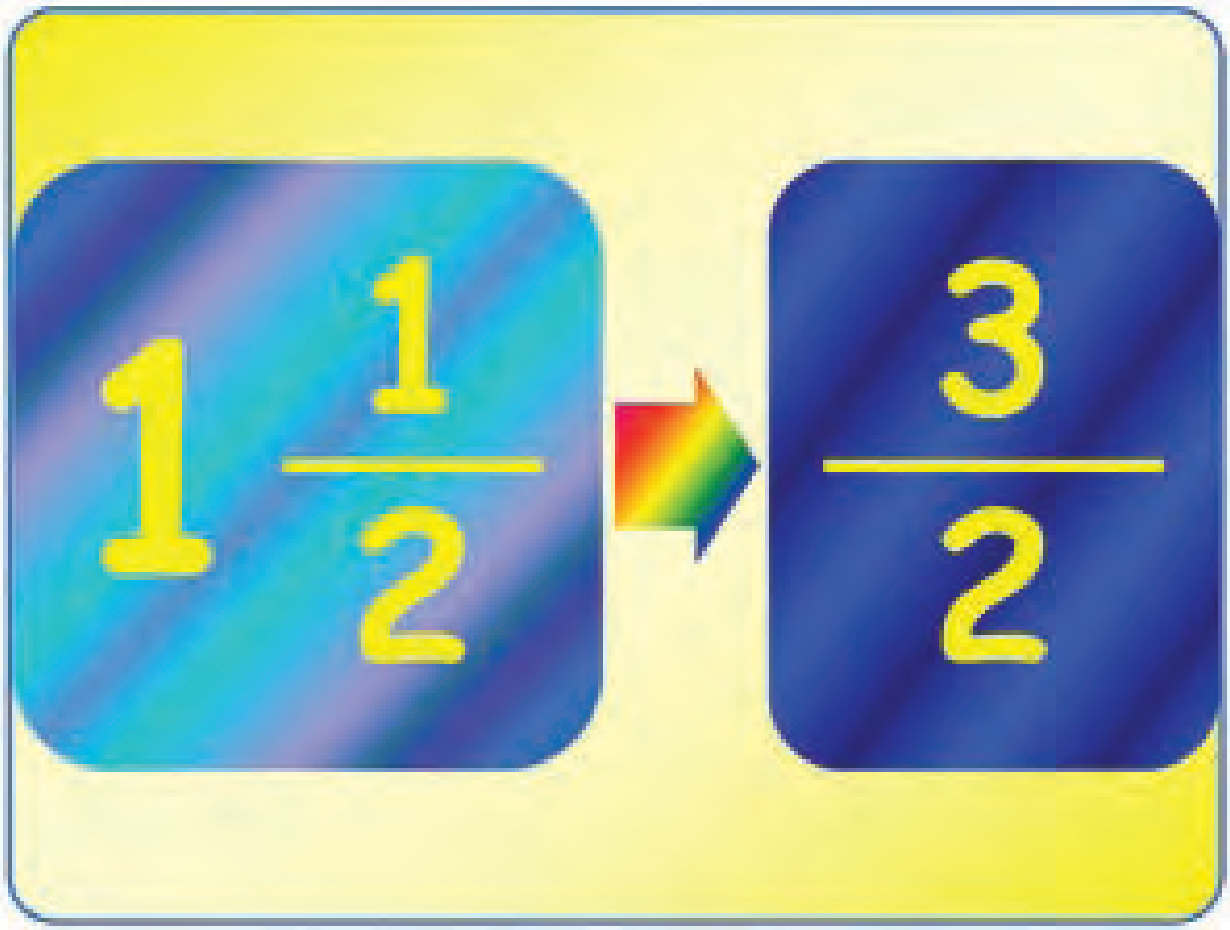
Numbered Illustrations

Mount the vocabulary pictures on the chalkboard and number each one. Provide each student with writing paper and a pen. Call the number of a picture. Each student should write the vocabulary word for the picture represented by that number. Repeat until all vocabulary words have been written. Review the students' responses.

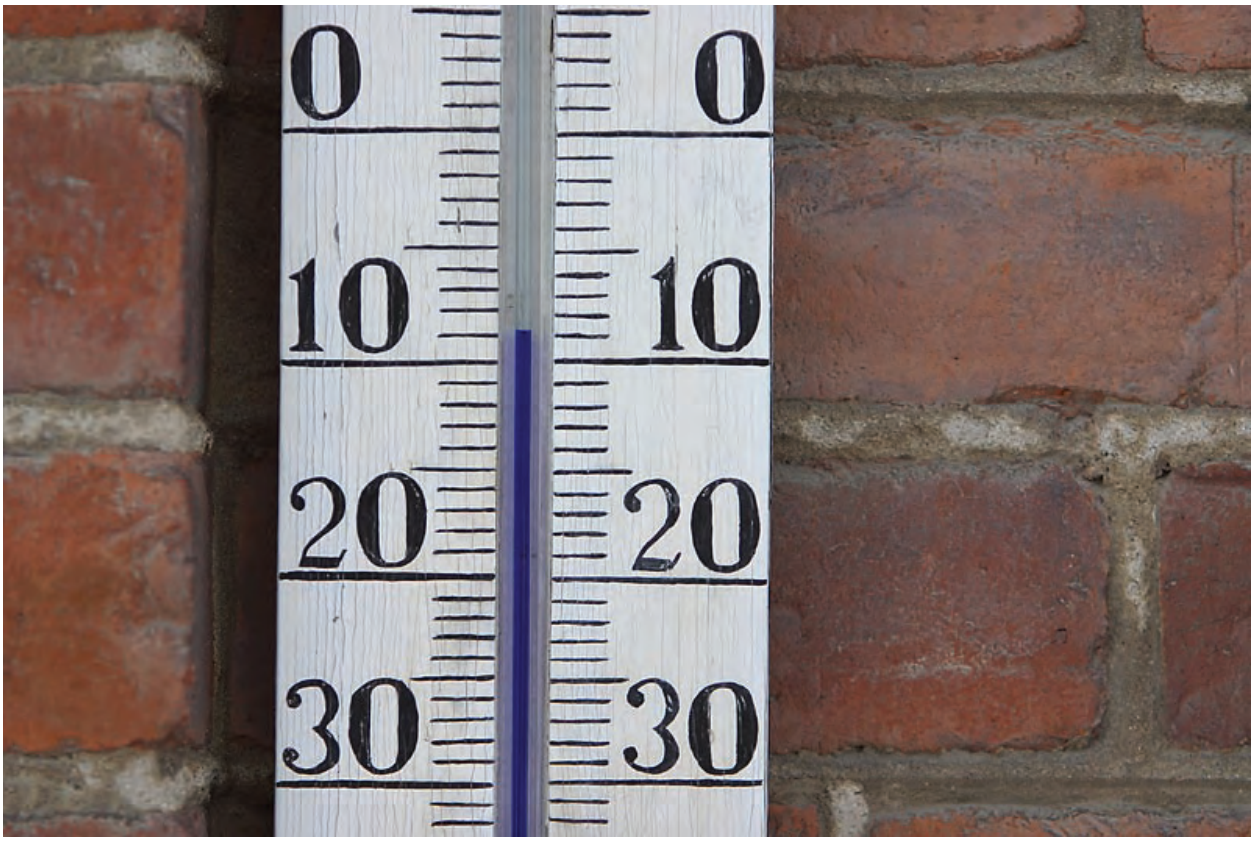
Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

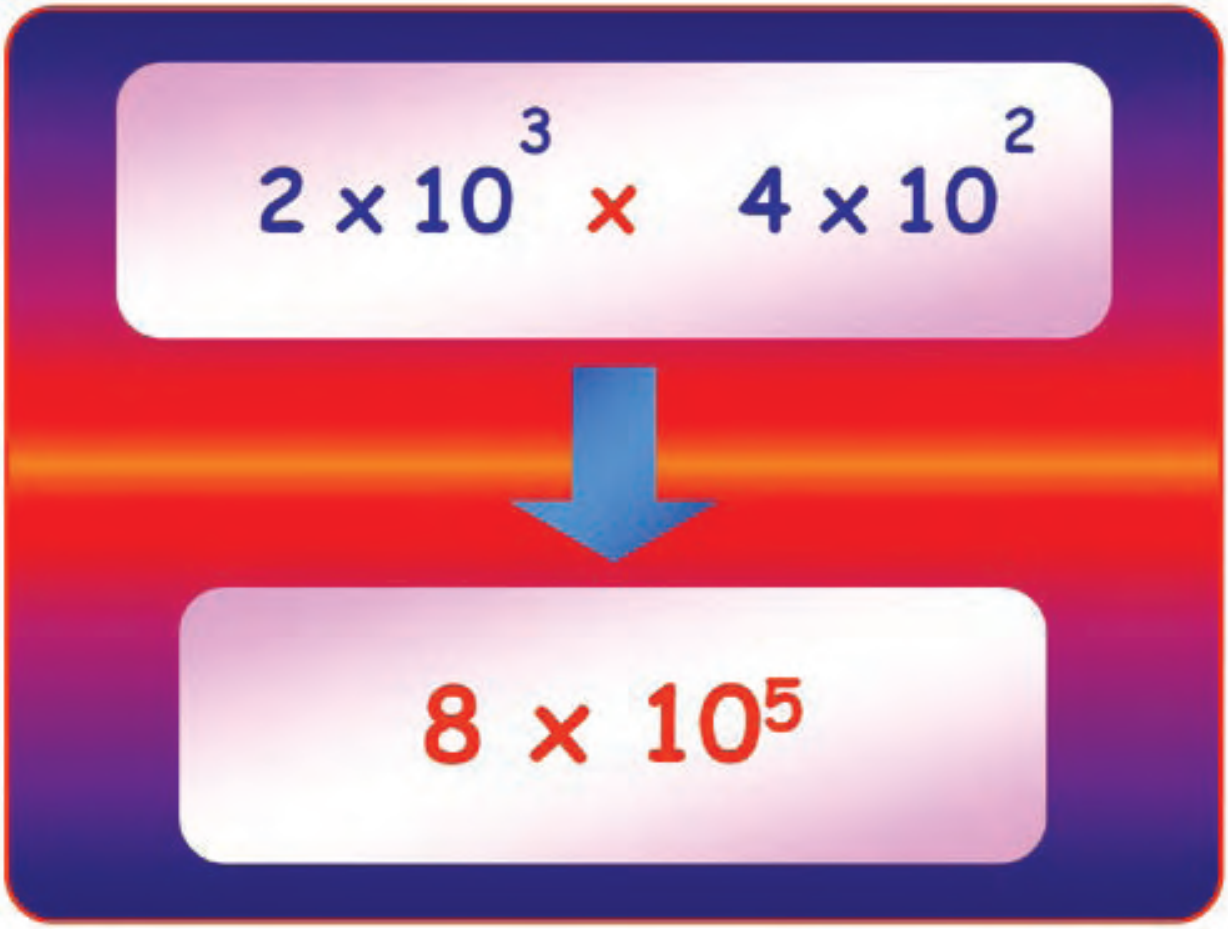
VOCABULARY PICTURES


1 1/2
3/2

MIXED NUMBERS


0
0
10
10
20
20
30
30

PROPERTIES


$2 \times 10^{3} \times 4 \times 10^{2}$
8×10^{5}

STANDARD FORM


1
2
2
4
3
6

EQUIVALENT FRACTIONS


5437
thousands
5 x 1000
hundreds
4 x 100
tens
3 x 10
ones
7 x 1

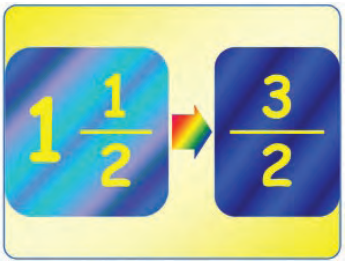
EXPANDED NOTATION

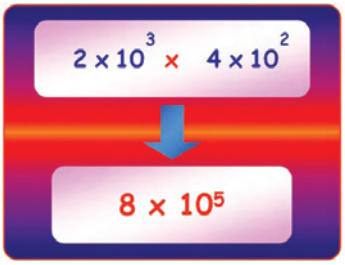
STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Numbered Pictures

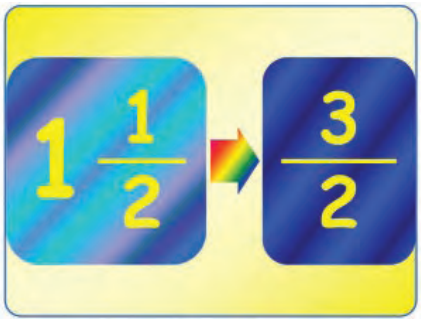
Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.

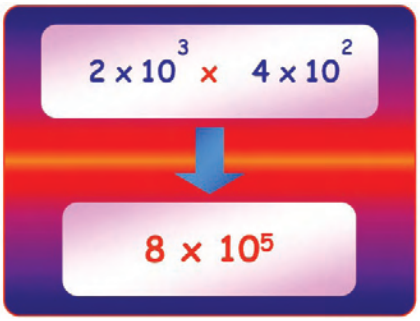




Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.





STUDENT SUPPORT MATERIALS

Reading • Sight Recognition and Encoding

Reading Comprehension

standard form

expanded notation

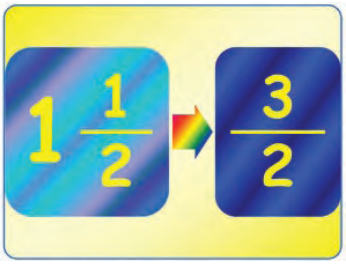
mixed numbers

equivalent fractions

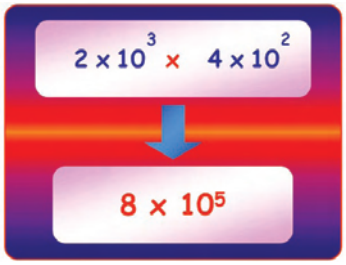
properties

Sight Words Activity Page

Have the students circle the word for each picture.



expanded notation
standard form
equivalent fractions
mixed numbers
properties



expanded notation
standard form
equivalent fractions
mixed numbers
properties

expanded notation
standard form
equivalent fractions
mixed numbers
properties

expanded notation
standard form
equivalent fractions
mixed numbers
properties

expanded notation
standard form
equivalent fractions
mixed numbers
properties

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

expand	perties
standard f	bers
equival	ed notation
pro	ent fractions
mixed num	orm

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

_____panded notation

_____andard form

e_____alent fractions

m_____ed numbers

_____perties

pro	ex	quiv
ix	st	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

This is where two lines intersect.	Fractions that have the same amount.	These are things that share common features or characteristics.
These have both whole numbers and fractions.	A way of writing numbers that shows place value.	These are numbers that can be divided by 2.
These are numbers that cannot be divided by 2.	These show numbers that are not equal.	A way to write large numbers easily.

1. expanded notation	2. standard form	3. equivalent fractions	4. mixed numbers	5. properties

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. Which of these shows expanded notation?
   - ❍ 100+20+5
   - ❍ 4-1/2
   - ❍ 2x10=20

2. Why are standard forms useful?
   - ❍ They are good for finding whole numbers.
   - ❍ They are used to find percent.
   - ❍ They are used to show big numbers.

3. Which of these shows equivalent fractions?
   - ❍ 1/3 2/3
   - ❍ 2/4 1/2
   - ❍ 1-1/4 1-1/2

4. Which of these shows mixed numbers?
   - ❍ 6
   - ❍ 2,349
   - ❍ 4-1/2

5. Which of these is a property of numbers?
   - ❍ color
   - ❍ odd
   - ❍ size

Which Belongs?

Have the students write the word that is correct for each sentence.

1. Expanded **operations/notation** is a way of writing numbers to show place value.

2. **Standard/Commutative** form is a way of writing large numbers easily.

3. **Equivalent/Associative** fractions have the same value or amount.

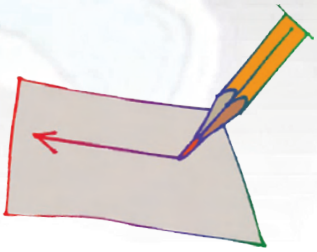
4. **Mixed/Proper** numbers have both whole numbers and fractions.

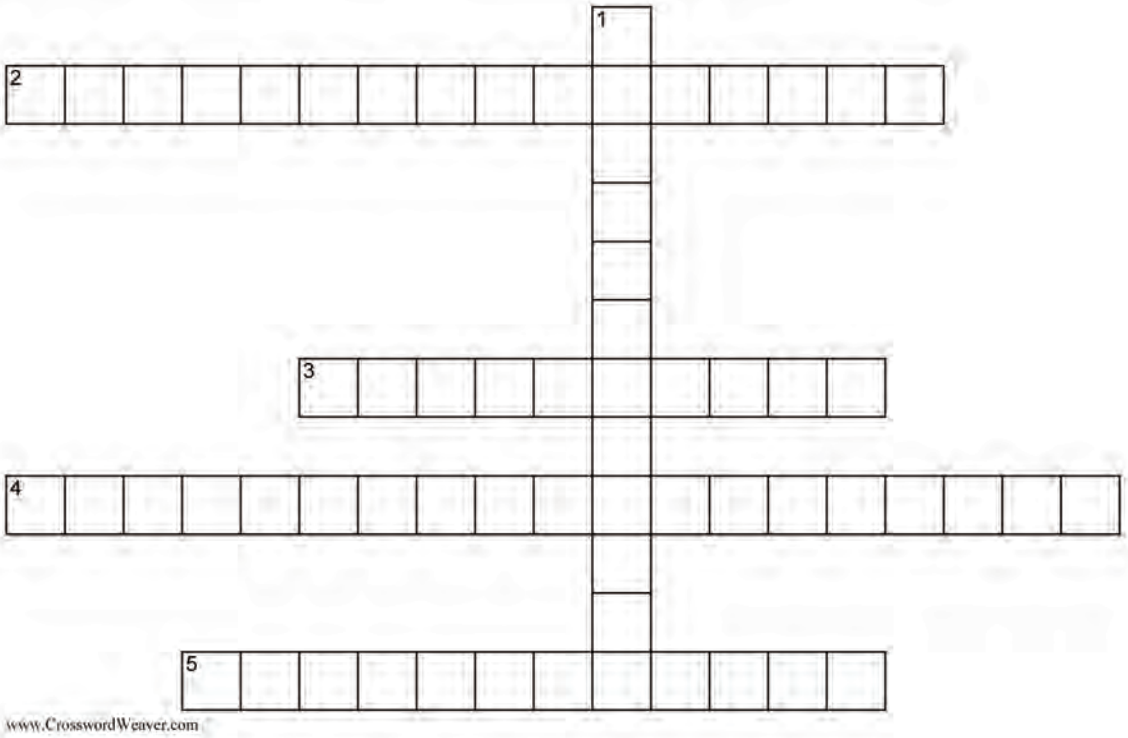
5. **Properties/Operations** are common features or characteristics.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





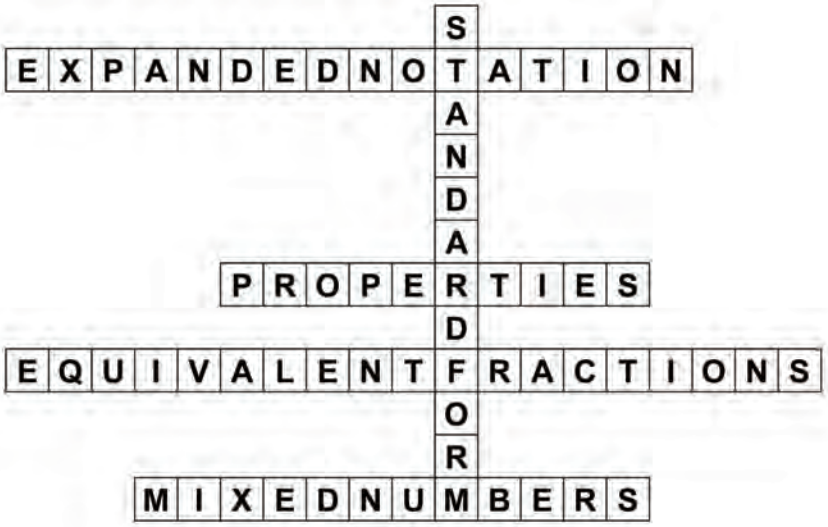
ACROSS

2 This is a way of writing numbers to show place value.
3 These are common features or characteristics.
4 These are fractions that have the same value or amount.
5 These are numbers written as whole numbers and fractions.

DOWN

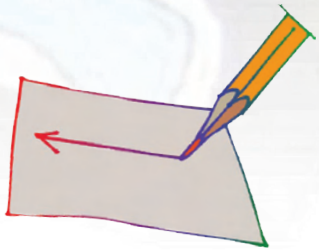
1 This is a way of writing down very large or very small numbers easily.

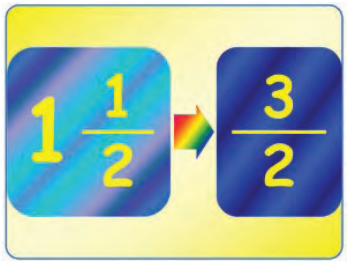
Crossword Puzzle Answers

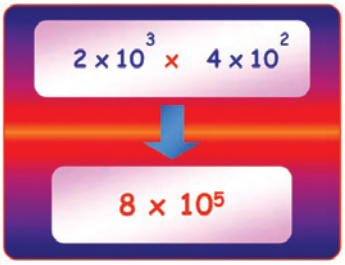


Basic Writing Activity Page

Have the students write the word for each picture.







UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 8

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **EXPANDED NOTATION**.
2. Write the number 2 on top of the picture for **STANDARD FORM**.
3. Write the number 3 on top of the picture for **EQUIVALENT FRACTIONS**.
4. Write the number 4 on top of the picture for **MIXED NUMBERS**.
5. Write the number 5 on top of the picture for **PROPERTIES**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. Expanded notation shows the place value of numbers.
2. Standard form is an integer that is a negative number.
3. Equivalent fractions have the same value.
4. Mixed numbers are integers in a set of numbers.
5. Properties can be the amounts of numbers.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

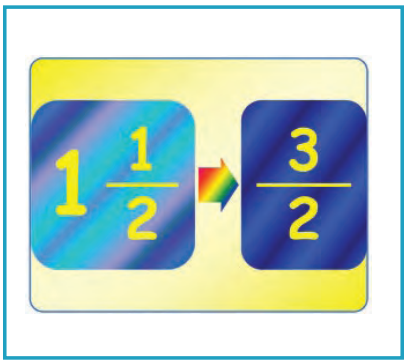
Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

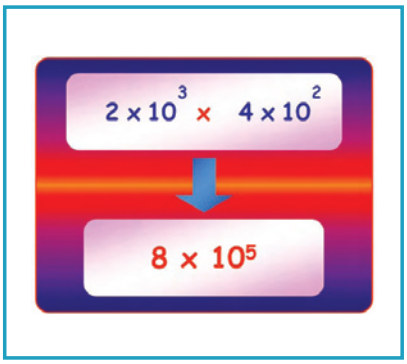
MATH PROGRAM

Unit Assessment Student Pages
Grade 6 • Unit 8

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**


1 1/2
3/2


2 × 10^3 × 4 × 10^2
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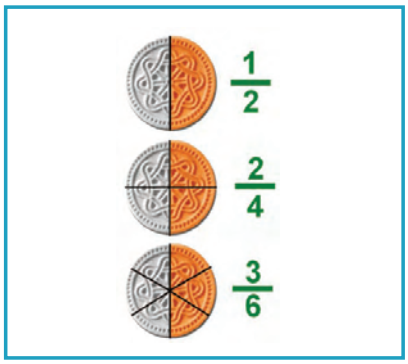
1/2
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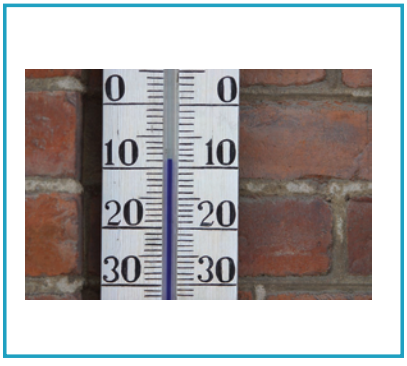
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thousands
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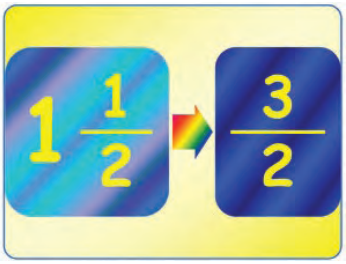
1. T F

2. T F

3. T F

4. T F

5. T F



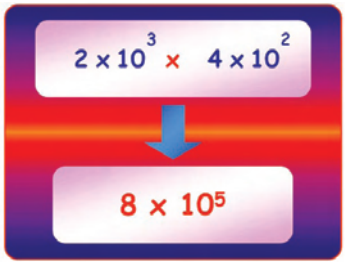
expanded notation

standard form

equivalent fractions

mixed numbers

properties



expanded notation

standard form

equivalent fractions

mixed numbers

properties

expanded notation

standard form

equivalent fractions

mixed numbers

properties

expanded notation

standard form

equivalent fractions

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properties

expanded notation

standard form

equivalent fractions

mixed numbers

properties

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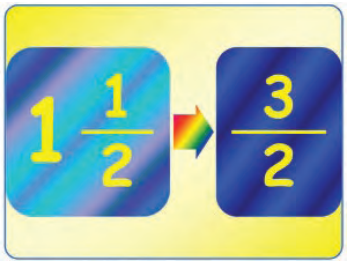
1. Which one of these show expanded notation?
   - ❍ 95%
   - ❍ 10-2/3
   - ❍ 100+10+4

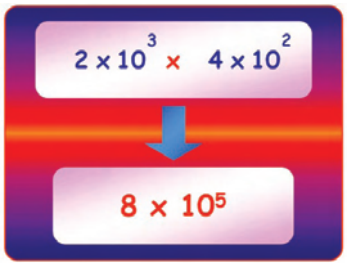
2. Which of these shows standard form?
   - ❍ 300+45+6
   - ❍ $2x10^3$
   - ❍ 1-1/2

3. Which of these shows equivalent fractions?
   - ❍ 1/2 2/3
   - ❍ 3/4 1/5
   - ❍ 2/4 1/2

4. Which of these shows mixed numbers?
   - ❍ 2/3
   - ❍ 50%
   - ❍ 2-3/4

5. What are the properties of equivalent fractions?
   - ❍ They are different.
   - ❍ They are integers.
   - ❍ They have the same value.


1 1/2
3/2


2 × 10^3 × 4 × 10^2
8 × 10^5


1/2
2/4
3/6


0
10
20
30


5437
thousands
5 x 1000
hundreds
4 x 100
tens
3 x 10
ones
7 x 1

EXPANDED NOTATION

STANDARD FORM

EQUIVALENT FRACTIONS

MIXED NUMBERS

PROPERTIES

UNIT 9

KEY VOCABULARY

Key Vocabulary

OPERATIONS	*These are used to solve problems. There are four operations in math—addition, subtraction, multiplication, and division.*
FACTOR	*This is a number that divides exactly into another number. For example, 4 divided by 2.*
COMMUTATIVE (LAW)	*In addition and multiplication, numbers may be added or multiplied in any order.*

Key Vocabulary

ASSOCIATIVE (LAW)

In addition and multiplication, no matter how the numbers are grouped, the answer will always be the same. For example, (a+b)+c = a + (b+c).

INVERSE (OPERATIONS)

These are opposite operations. Addition and subtraction are inverse operations. Multiplication and division are inverse operations.

LESSONS

Language and Skills Development

LISTENING

Let's Move

Identify an appropriate body movement for each vocabulary word. This may involve movements of hands, arms, legs, etc. Practice the body movements with the students. When the students are able to perform the body movements well, say a vocabulary word. The students should respond with the appropriate body movement. You may wish to say the vocabulary words in a running story. When a vocabulary word is heard, the students should perform the appropriate body movement. Repeat, until the students have responded to each word a number of times. Rather than using body movements, or—in addition to the body movements—you may wish to use "sound effects" for identifying vocabulary words. The students should perform the appropriate body movements/sound effects for the words you say.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

SPEAKING

The Disappearing Pictures

Mount five or six pictures on the board, vertically. Point to the picture at the top and tell the students to name it. Continue in this way until the students have named all of the pictures from top to bottom. Then, remove the last picture and repeat this process—the students should say all of the vocabulary words, including the name for the "missing" picture. Then, remove another picture from the board and have the students repeat this process. Continue in this way until the students are saying all of the vocabulary words from a blank board or until the students cannot remember the "missing pictures."

Under the Bridge

Have two students stand facing one another with hands clasped. The two students should raise their hands above their heads to resemble the arch of a bridge. Have the remaining students line up in a straight line. The students should file "under the bridge" in single file. When you clap your hands, the two students should lower their hands, trapping one of the students "on the bridge." The student who is trapped should then identify a vocabulary picture you show him/her. Repeat until a number of students have responded.

Language and Skills Development

READING

Face

Mount the sight words around the classroom on the walls, board, and windows. Group the students into two teams. Give the first player in each team a flashlight. Darken the classroom, if possible. Say one of the sight words. When you say "Go," the students should turn their flashlights on and attempt to locate the sight word you said. The first player to do this correctly wins the round. Repeat until all players in each team have participated.

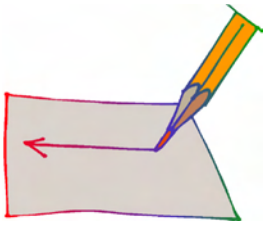
Flashlight Encode

Cut each of the sight words in half. Mount all of the word halves in a scattered form on the chalkboard. Stand in front of the chalkboard with two flashlights. Shine the light of one flashlight on a word half. Then, shine the light of the other flashlight on its matching half. The students should say the sight word. However, when the lights of the two flashlights are shining on word halves that do not go together, the students should remain silent. If four flashlights are available, this activity may be done in team form. In this case, give the first player in each team two flashlights. Say a sight word. The first player in each team must then use his/her two flashlights to illuminate the word halves for the sight word you said. The first player to do this correctly wins the round.

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

WRITING



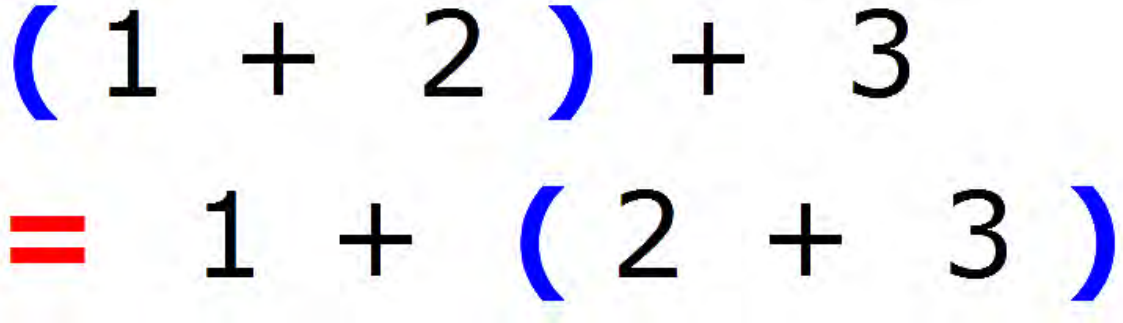
Watch Your Half

Prepare a photocopy of each of the vocabulary pictures. Cut the photocopied pictures in half. Keep the picture halves in separate piles. Group the students into two teams. Give all of the picture halves from one pile to the players in Team One. Give the picture halves from the other pile to the players in Team Two. Say a vocabulary word. When you say "Go," the student from each team who has the picture half for the vocabulary word you said should rush to the board and write the word on the board. The first player to do this correctly wins the round. Repeat until all players have participated. This activity may be played more than once by collecting, mixing, and redistributing the picture halves to the two teams.

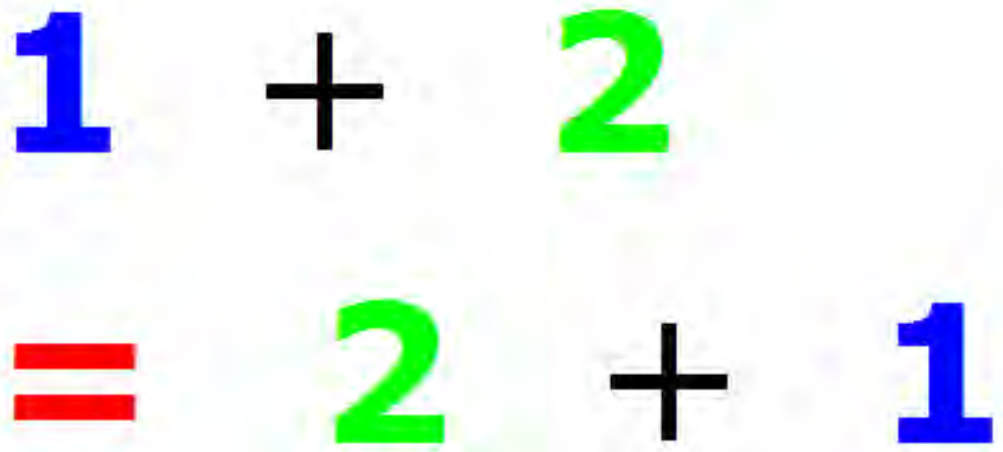
Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

VOCABULARY PICTURES

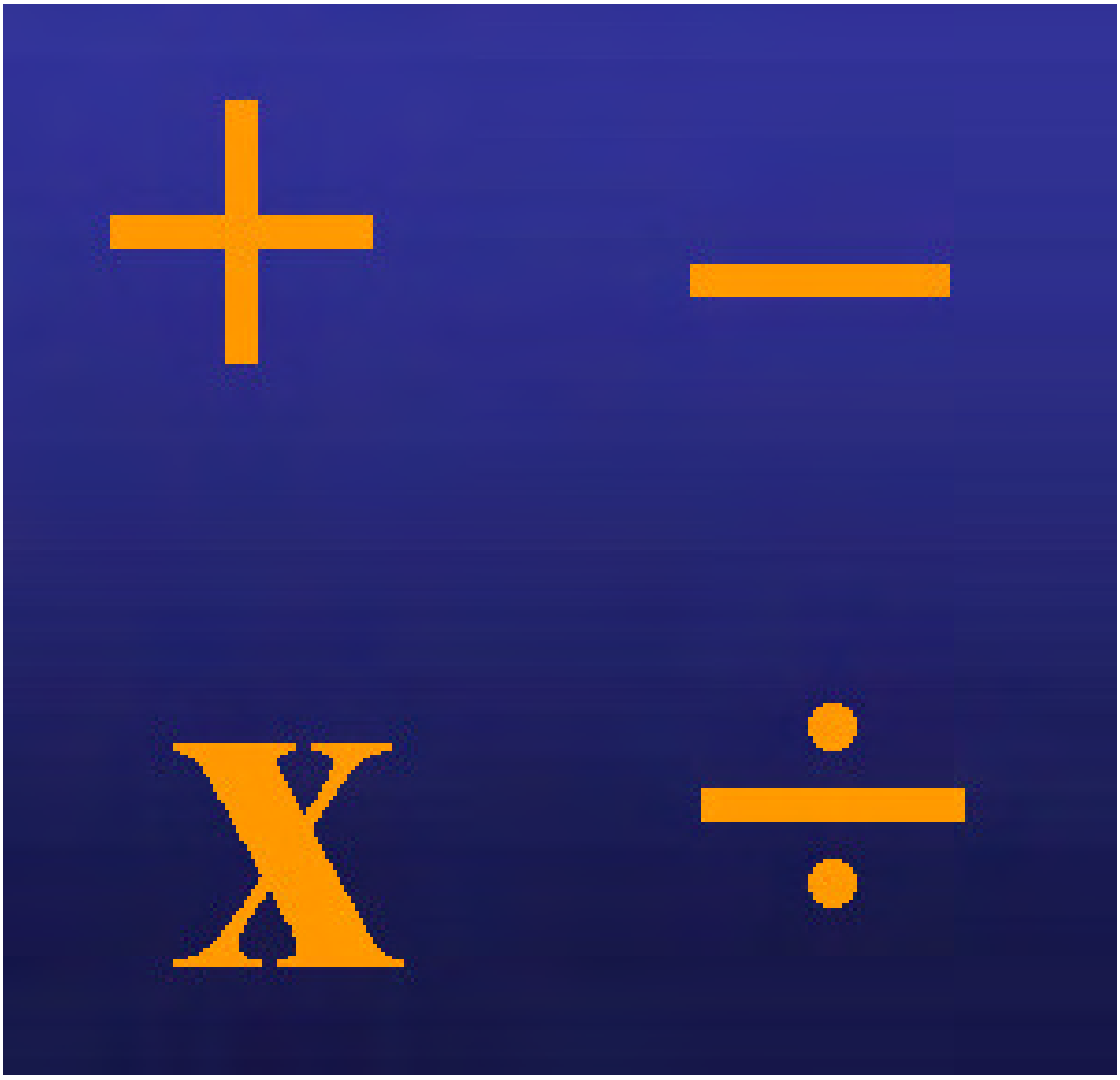

(1 + 2) + 3
= 1 + (2 + 3)

ASSOCIATIVE


1 + 2
= 2 + 1

COMMUTATIVE

FACTOR



INVERSE OPERATIONS

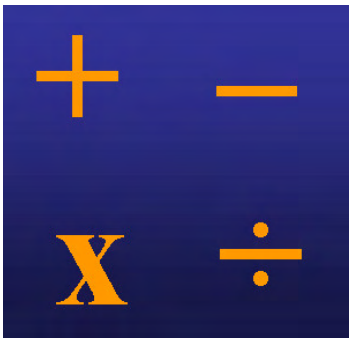
OPERATIONS

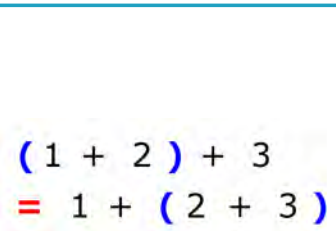
STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Numbered Pictures

Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.

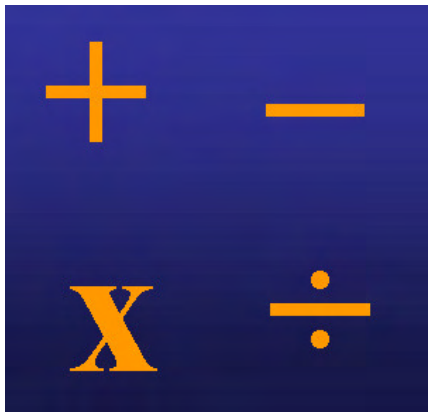




Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.

1 + 2
= 2 + 1



(1 + 2) + 3
= 1 + (2 + 3)

STUDENT SUPPORT MATERIALS

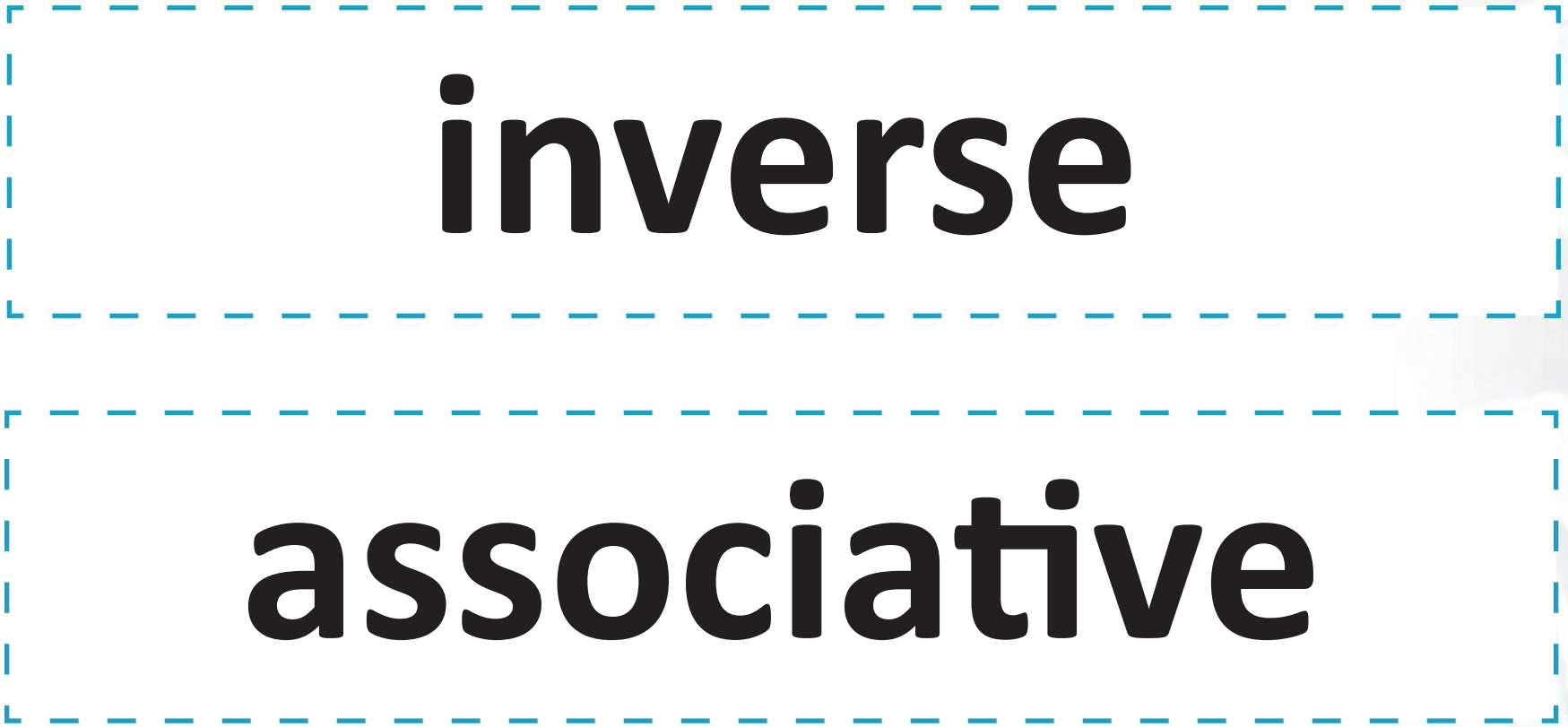
Reading • Sight Recognition and Encoding

Reading Comprehension

commutative

factor

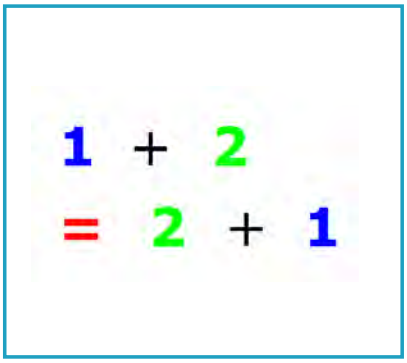
operations


inverse
associative

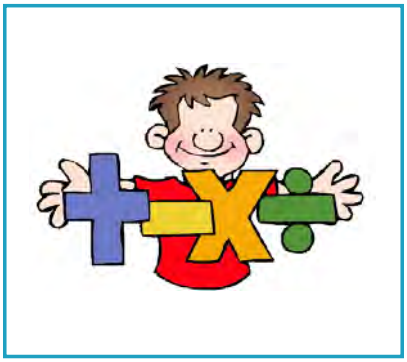
Sight Words Activity Page

Have the students circle the word for each picture.

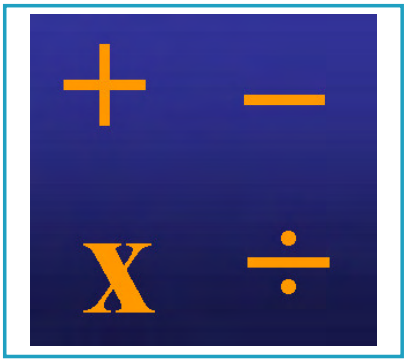
operations
factor
commutative
associative
inverse



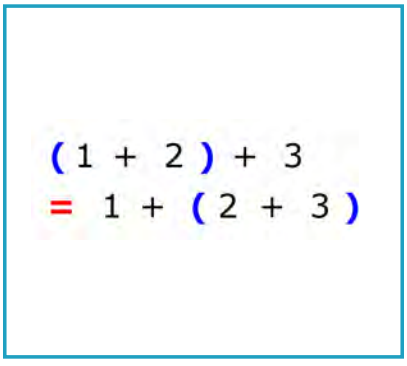
operations
factor
commutative
associative
inverse



operations
factor
commutative
associative
inverse



operations
factor
commutative
associative
inverse



operations
factor
commutative
associative
inverse

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

oper	tative
fac	ative
commu	verse
associ	tor
in	ations

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

o_____ations

fac_____

com_____

assoc_____tive

_____verse

ia	in	mu
tor	per	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

These are used to solve problems.	**This is the part of a fraction, below the line.**	**This law says that in addition and multiplication, no matter how the numbers are grouped, the answer will always be the same.**
_____	_____	_____
These are two things that go together.	**This law says that in addition and multiplication, numbers may be added or multiplied in any order.**	**This relates to a number system based on 10.**
_____	_____	_____
These are opposite operations.	**These are positive and negative numbers.**	**This is a number that divides exactly into another number.**
_____	_____	_____

1. operations **2. factor** **3. commutative** **4. associative** **5. inverse**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. Which one of these is an operation?
   - ❍ percent
   - ❍ properties
   - ❍ addition

2. Which operation goes with factors?
   - ❍ multiplication
   - ❍ division
   - ❍ addition

3. Which of these shows the commutative law?
   - ❍ 2+4=4+2
   - ❍ 10-4=6
   - ❍ (3+4)+5=11

4. Which of these shows the associative law?
   - ❍ (2+4)+5=11
   - ❍ (4-2)+4=6
   - ❍ (2+4)+3=2+(4+3)=9

5. Which of these are inverse operations?
   - ❍ addition and multiplication
   - ❍ multiplication and division
   - ❍ subtraction and division

Which Belongs?

Have the students write the word that is correct for each sentence.

1. **Operations/Integers** are used to solve problems.

2. A **factor/decimal** is a number that divides exactly into another number.

3. The **commutative/associative** law states that numbers may be added or multiplied in any order.

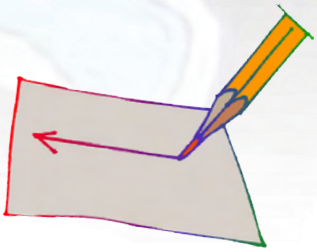
4. The **commutative/associative** law states that in addition and multiplication, the answer will always be the same.

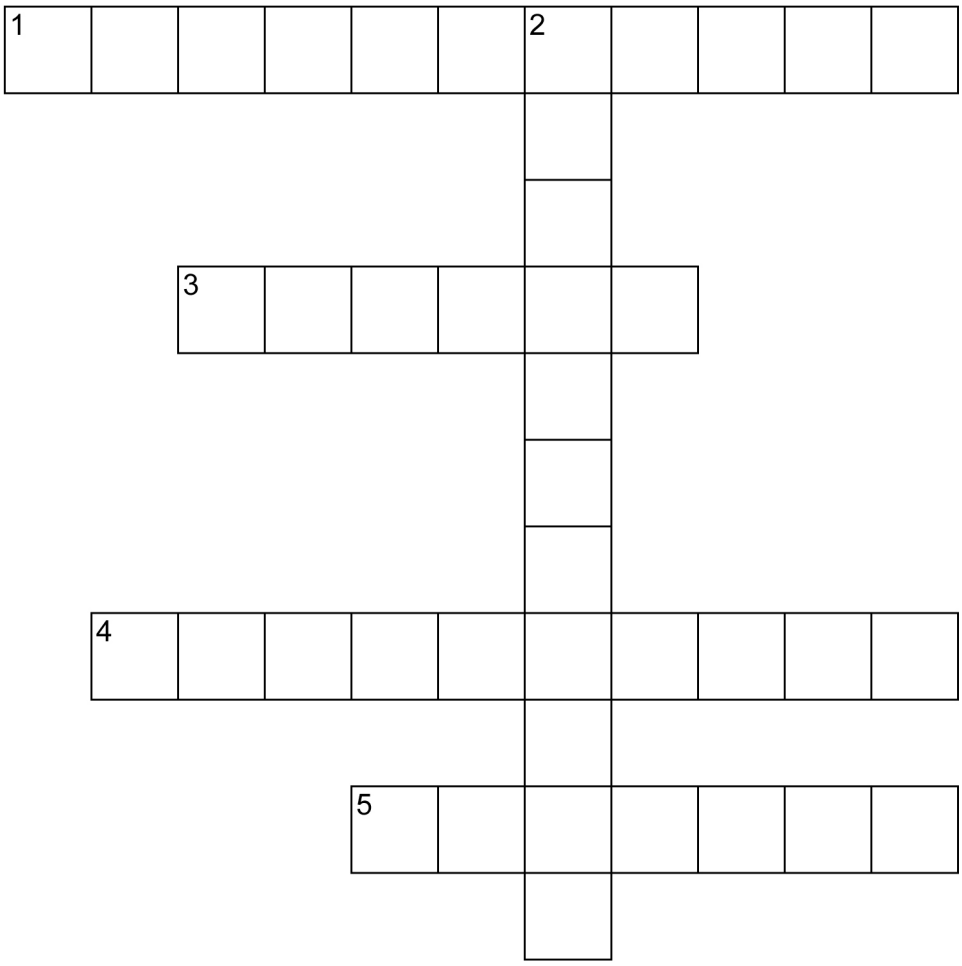
5. **Inverse/Negative** operations are opposite operations.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





www.CrosswordWeaver.com

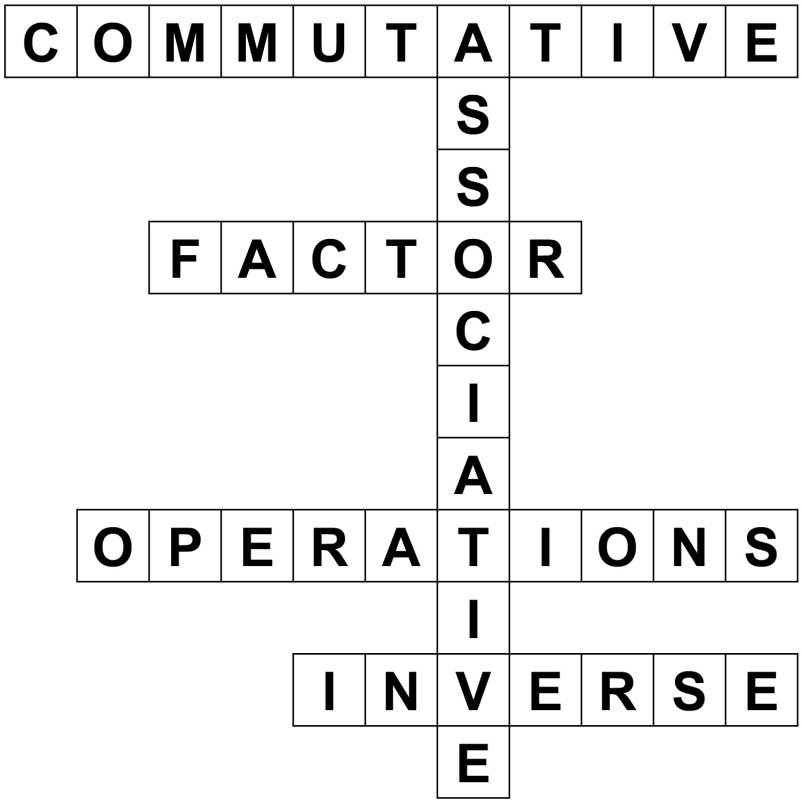
ACROSS

1 In addition and multiplication, numbers may be added or multiplied in any order.
3 This is a number that divides exactly into another number.
4 These are used to solve problems. There are four of these.
5 These are opposite operations.

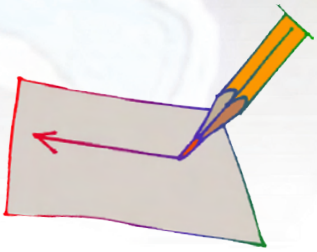
DOWN

2 In addition and multiplication, no matter how the numbers are grouped, the answer will always be the same.

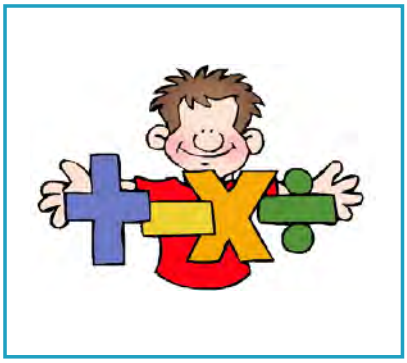
Crossword Puzzle Answers

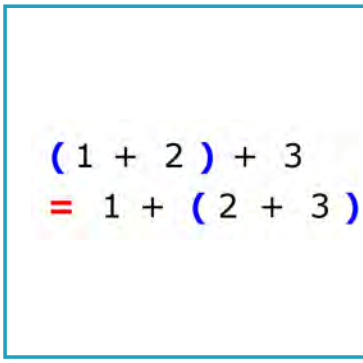


Basic Writing Activity Page



Have the students write the word for each picture.





UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 9

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **OPERATIONS**.
2. Write the number 2 on top of the picture for **FACTOR**.
3. Write the number 3 on top of the picture for **COMMUTATIVE** law.
4. Write the number 4 on top of the picture for **ASSOCIATIVE** law.
5. Write the number 5 on top of the picture for **INVERSE** operations.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. There are three operations in math.
2. A factor can be divided exactly into another number.
3. The commutative law says that all fractions and whole numbers are equivalent.
4. The associative law says that the grouping of the numbers in addition and multiplication will not change the answers.
5. Addition and subtraction are inverse operations.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

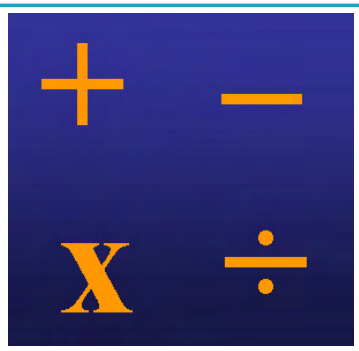
MATH PROGRAM

Unit Assessment Student Pages
Grade 6 • Unit 9

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**

1 + 2
= 2 + 1



(1 + 2) + 3
= 1 + (2 + 3)

1. T F

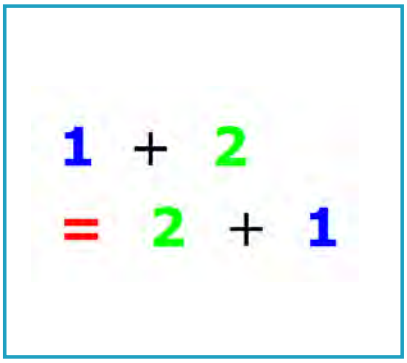
2. T F

3. T F

4. T F

5. T F

operations
factor
commutative
associative
inverse



operations
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commutative
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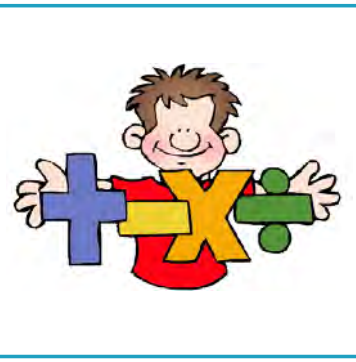
inverse



operations
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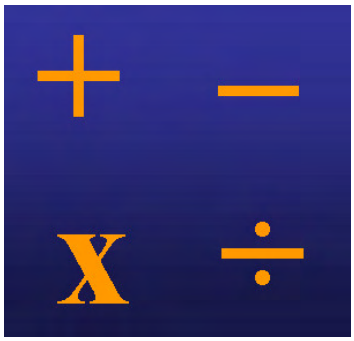
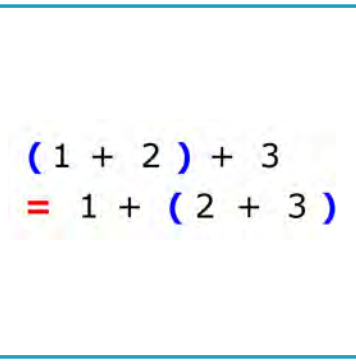


operations
factor
commutative
associative
inverse



operations
factor
commutative
associative
inverse

oper	tions utions etions ations itions ions shuns rations ns
fac	tir tur tar ir ar ur tor or tore
com	mitative mative mutative metative tative mutative ive matative ive
assoc	iative uative eative oative ciative cutive cative ive ve
in	varse verse vurse virse urs ar se vse vverse

1 In math, what are operations used for?

- ❍ They are used to solve problems.
- ❍ They are used to find parentheses.
- ❍ They are used to identify people.

2 In math, what is a factor?

- ❍ A number that is less than 0.
- ❍ A number that divides exactly into another number.
- ❍ A number that shows inequality.

3 What does the commutative law say?

- ❍ In addition and multiplication, numbers can be used in any order.
- ❍ In addtion and multiplication, numbers must be in parentheses.
- ❍ In addition and multiplication, the grouping of the numbers does not change the answer.

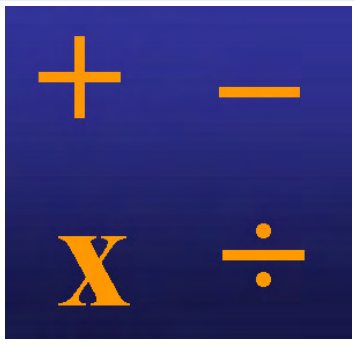
4 What does the associative law say?

- ❍ In addition and multiplication, numbers can be used in any order.
- ❍ In addtion and multiplication, numbers must be in parentheses.
- ❍ In addition and multiplication, the grouping of the numbers does not change the answer.

5 Addition and subtraction are

- ❍ mixed numbers.
- ❍ inverse operations.
- ❍ standard forms.

1 + 2
= 2 + 1



(1 + 2) + 3
= 1 + (2 + 3)

OPERATIONS

_____

FACTOR

_____

COMMUTATIVE LAW

_____

ASSOCIATIVE LAW

_____

INVERSE OPERATIONS

_____

UNIT 10

KEY VOCABULARY

Key Vocabulary

PRODUCT	*The result when two numbers are multiplied.*
PAIR	*Two things that belong together.*
LEAST COMMON MULTIPLE	*The smallest number that is the multiple of two or more other numbers.*

Key Vocabulary

GREATEST COMMON FACTOR	*The largest number that will divide into two or more other numbers exactly. For example, the greatest common factor of 9, 12, and 15 is 3.*
DISTRIBUTIVE PROPERTY	*This is when you multiply the addends of a number and then add its products.*

LESSONS

Language and Skills Development

LISTENING

Hop the Line

Make a masking tape line on the floor. Have the students stand on the line—their toes touching the masking tape. Have the students listen for a specific word or sentence. Say a number of other words or sentences, eventually repeating the word or sentence you said at the beginning of the round. When the students hear that word or sentence, they must hop to the other side of the line. When the students hop to the other side of the line, they should then turn around and place their toes on the line once again. Repeat this process using a number of different vocabulary words or sentences.

Mini Pictures

Provide each student with a copy of the mini-pictures page from the Student Support Materials. When you say the key words, the students must find the pictures for them. Then, have the students cut out the pictures. Say the keywords and the students should hold up the pictures for them.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

SPEAKING

Visual Memory

Mount the math vocabulary pictures on the board. The students should look carefully at the pictures. Then, have the students close their eyes. Remove one of the pictures from the board and place it to the side. The students should then open their eyes and identify the "missing picture." Continue in this way until all of the pictures have been removed. Another way to conduct this activity is to do the reverse. In this case, prepare two or three extra sets of vocabulary pictures. Mount a number of pictures on the board. The students should look carefully at the pictures. Then, have the students close their eyes. Add another picture to the board. The students should open their eyes and identify the "new picture." This activity (and the previous form of the activity) may be done in team form. In this case, the first player to identify the new or missing picture wins the round.

Language and Skills Development

READING

Balloon Volleyball

Group the students into two teams. The two teams should stand, facing one another. Toss a round, inflated balloon to the members of Team One. The members of Team One must then bounce the balloon to the members of Team Two. The players should continue to bounce the balloon back and forth in this way until a team loses the balloon. You may wish to establish the rule that players may not move their feet during the activity. When a team loses the balloon, show them a vocabulary picture and all team members in that team must say the vocabulary word for it. Repeat until players in both teams have responded a number of times.

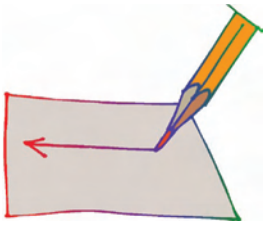
Half Time

Before the activity begins, cut each of the sight words in half. Keep one half of each sight word and give the remaining halves to the students. Hold up one of your halves and the student who has the other half of that word must show his/her half and say the sight word. Repeat in this way until all students have responded. An alternative to this approach is to give all of the word halves to the students. Say one of the sight words and the two students who have the halves that make up the sight word must show their halves. Depending upon the number of students in your class, you may wish to prepare extra sight word cards for this activity.

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Show a picture from this unit. The students must use the cut out letters to spell the word for the picture. Review the students' work. Repeat, until all of the words have been spelled.

WRITING



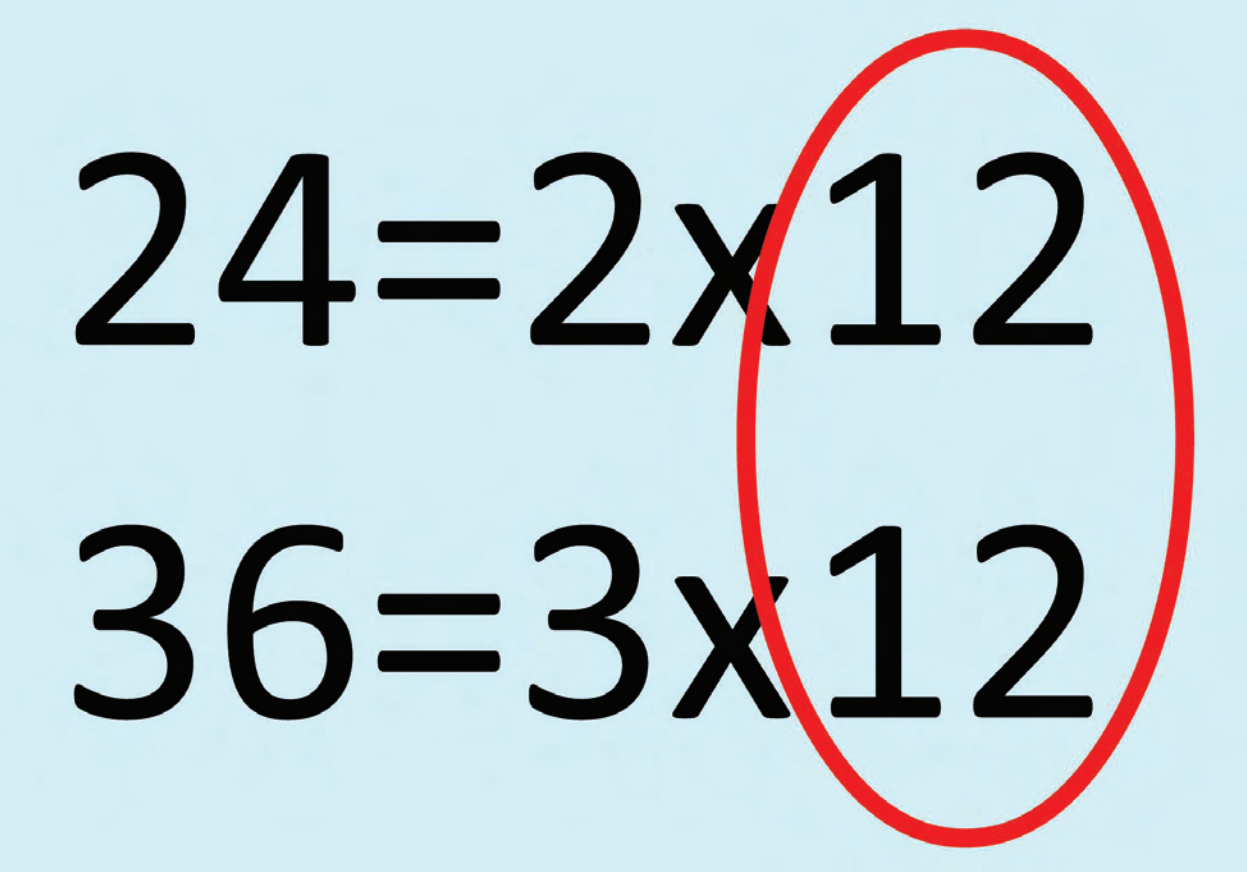
The Other Half

Cut each of the sight words in half. Give each student a sheet of writing paper, a pen, and one of the word halves. Each student should glue the word half on his/her writing paper and then complete the spelling of the word. You may wish to have enough word halves prepared so that each student completes more than one word. Afterwards, review the students' responses.

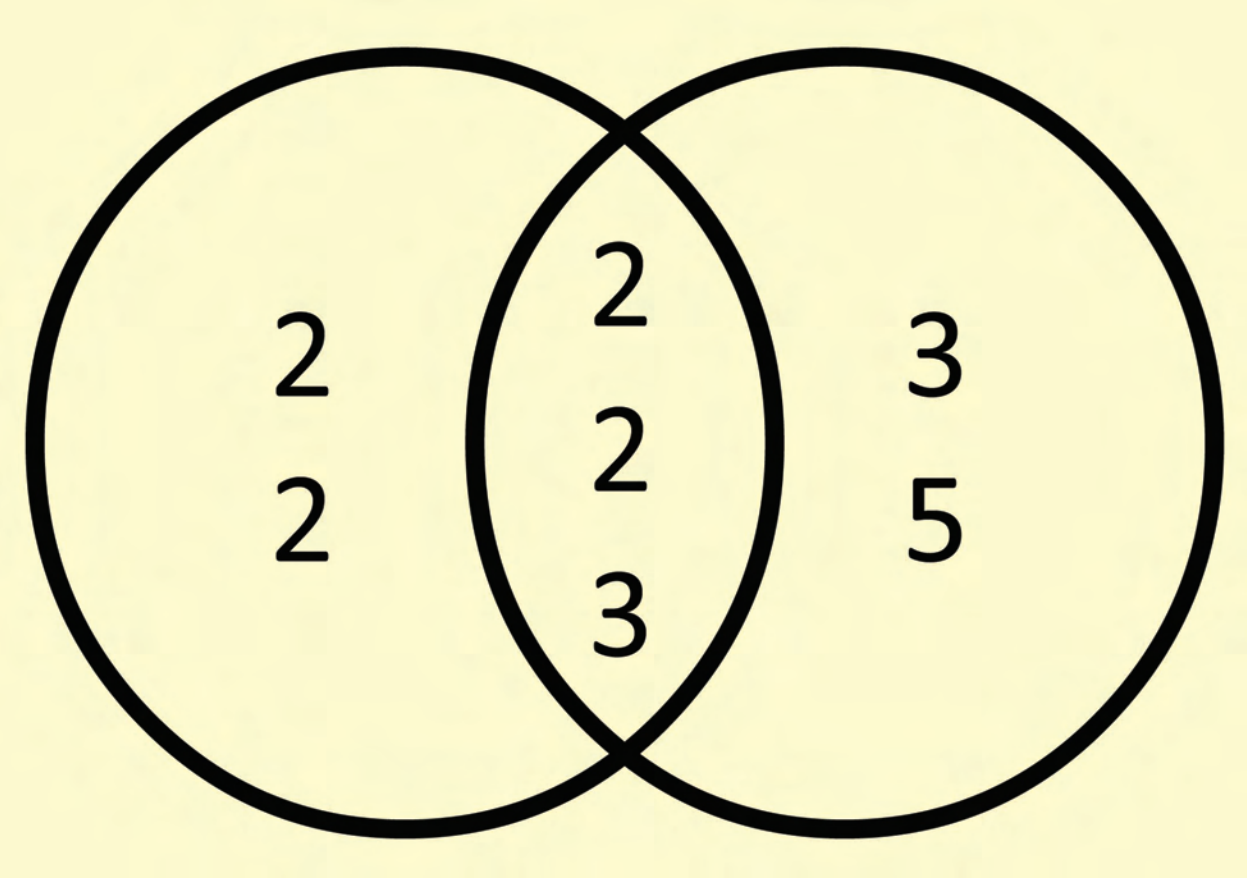
Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

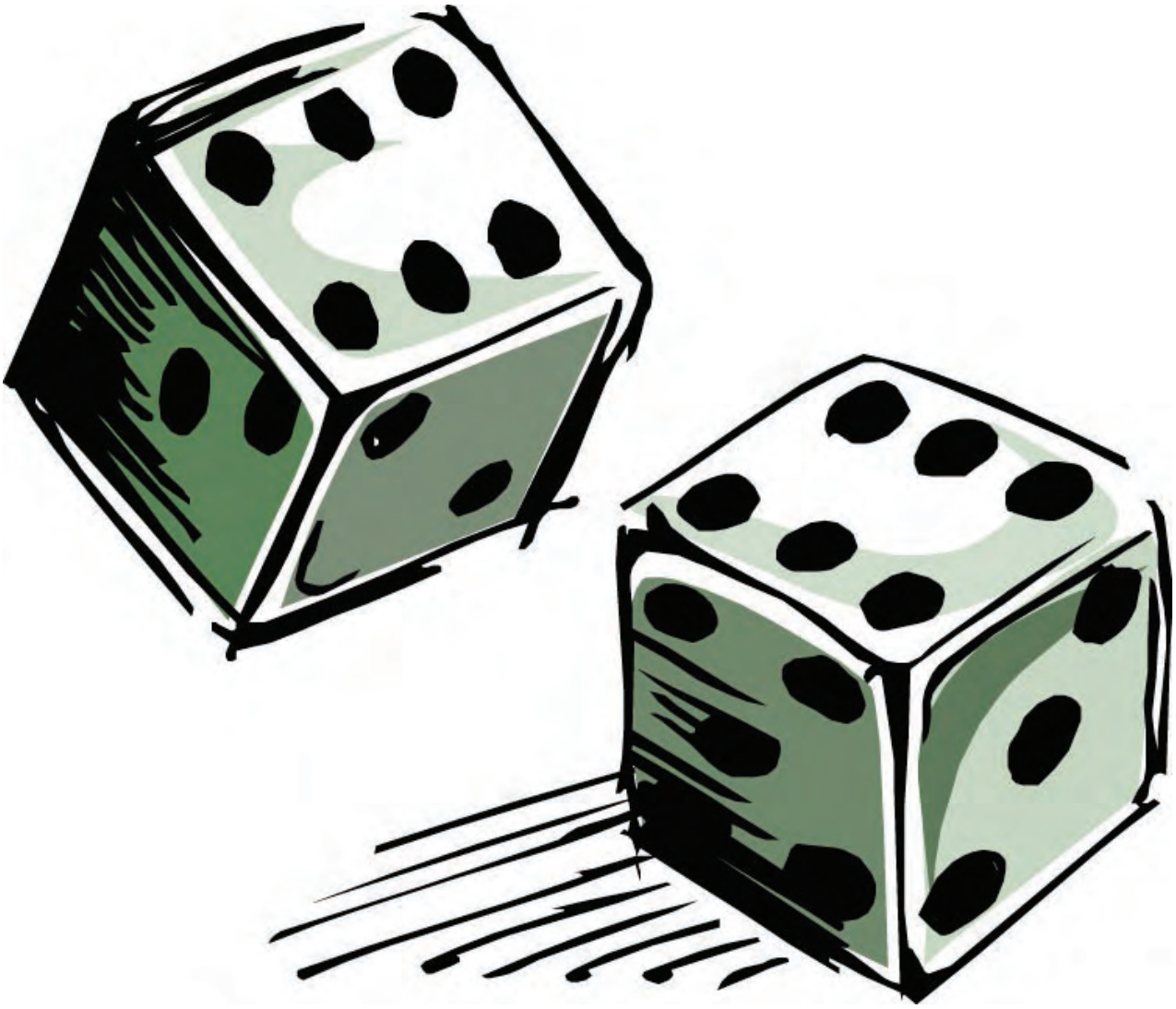
VOCABULARY PICTURES


24=2x12
36=3x12

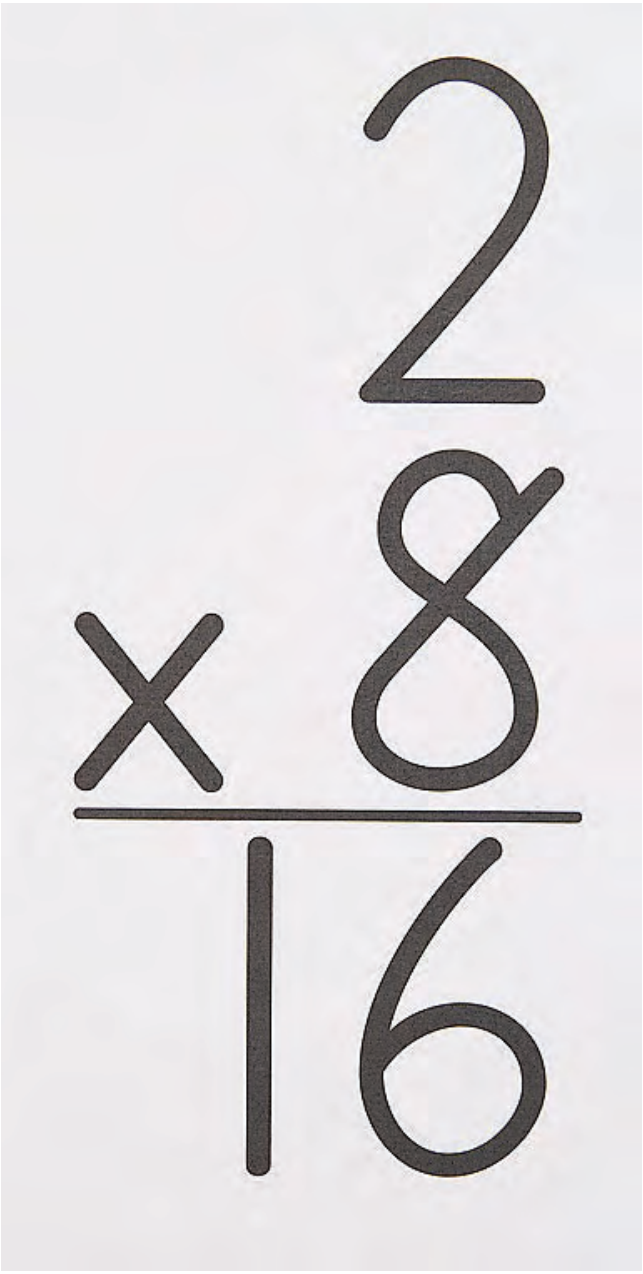
GREATEST COMMON FACTOR


2
2
2
2
3
3
5

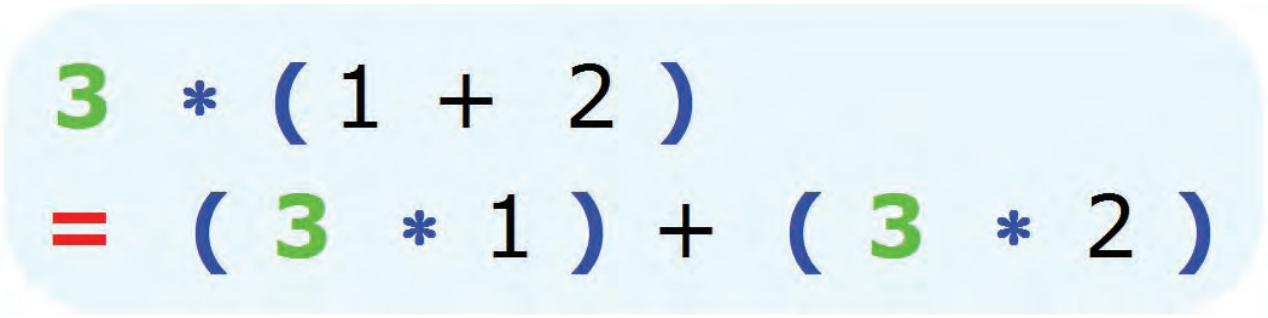
LEAST COMMON MULTIPLE



PAIRS


2
8
×
16

PRODUCT


3 * (1 + 2)
= (3 * 1) + (3 * 2)

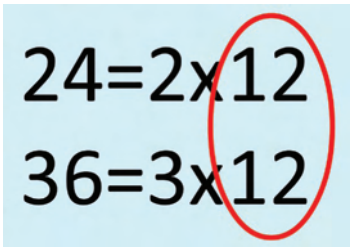
DISTRIBUTIVE PROPERTY

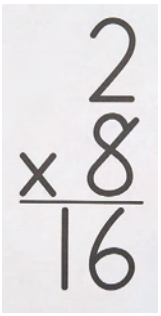
STUDENT SUPPORT MATERIALS

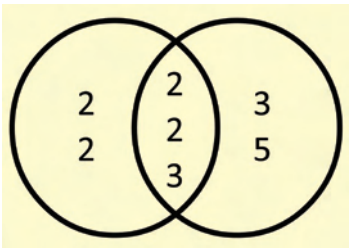
Listening • Mini Pictures

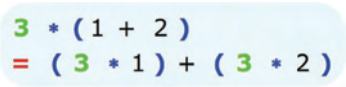
Numbered Pictures

Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.



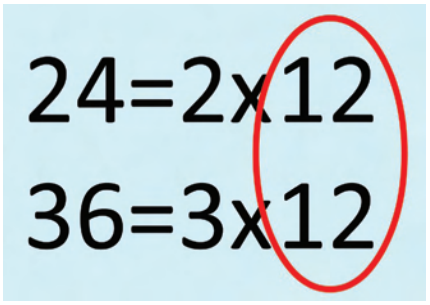


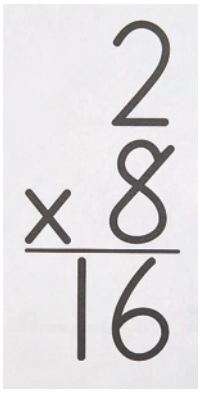


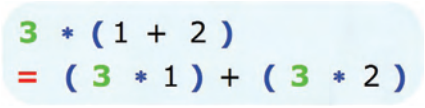


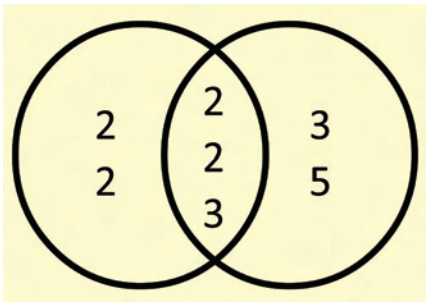
Mini Pictures

Provide each student with a copy of this page. The students should cut out the pictures and lay them on the floor or desks. Say the key words a number of times; the students must hold up the pictures for the words you say. You can also have pairs of students participate in the activity, to see which student can locate the correct graphic first. Later, say three words and the students must find the correct pictures to reproduce the sequence of words that you said. Repeat using different sequences of key words.









STUDENT SUPPORT MATERIALS

Reading • Sight Recognition and Encoding

Reading Comprehension

greatest common factor

least common multiple

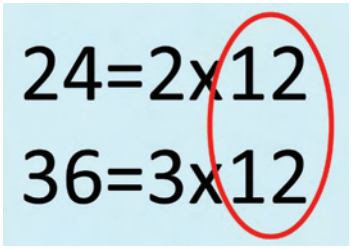
pairs

distributive property

product

Sight Words Activity Page

Have the students circle the word for each picture.



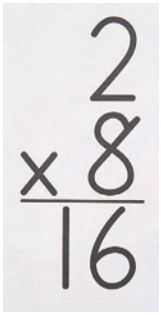
product

pairs

least common multiple

greatest common factor

distributive property



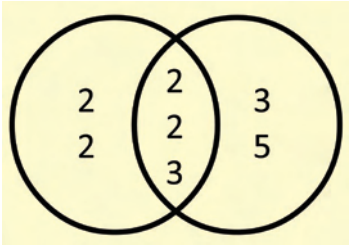
product

pairs

least common multiple

greatest common factor

distributive property



product

pairs

least common multiple

greatest common factor

distributive property

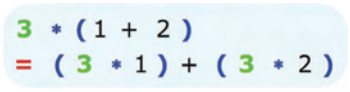
product

pairs

least common multiple

greatest common factor

distributive property



product

pairs

least common multiple

greatest common factor

distributive property

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

pro	mon factor
pa	tive property
least com	duct
greatest com	irs
distribu	mon multiple

Encoding Activity Page

Have the students cut out the word parts and glue them into their correct words.

pro_____

p_____s

least com_____multiple

great_____common factor

dis_____utive property

trib	**duct**	**mon**
air	**est**	

Word and Definition Match

Have the students write the word numbers under their matching definitions.

This states that in addition and multiplication, numbers may be added or multiplied in any order.	**This is a way of writing numbers to show place value.**	**The smallest number that is the multiple of two or more other numbers.**
_____	_____	_____
The biggest number that will divide two or more other numbers exactly	**The result when two numbers are multiplied.**	**These are numbers written as whole numbers and fractions.**
_____	_____	_____
Two things that go together.	**This is a number that divides exactly into another number.**	**This states that multiplying a number is the same as multiplying its addends by the number then adding the products.**
_____	_____	_____

1. product	**2. pairs**	**3. least common multiple**	**4. greatest common factor**	**5. distributive property**

What's the Answer?

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. What operation makes a product?
   - ❍ addition
   - ❍ multiplication
   - ❍ subtraction

2. How many objects are in a pair?
   - ❍ 5
   - ❍ 2
   - ❍ 3

3. What is the least common multiple?
   - ❍ the smallest number that is the multiple of two or more other numbers.
   - ❍ the largest number that is the multiple of two or more other numbers.
   - ❍ the pair of numbers that is the multiple of two or more other numbers.

4. What is the greatest common factor of 9, 12, and 15?
   - ❍ 5
   - ❍ 8
   - ❍ 3

5. What does the distributive property state?
   - ❍ Multiplying a number is the same as multiplying the addends of the number and then adding its product.
   - ❍ Adding numbers is the same as multiplying addends by the number and adding the products.
   - ❍ Multiplying a number is the same as multiplying its products by the number and adding the sums.

Which Belongs?

Have the students write the word that is correct for each sentence.

1. **Multiplication/Addition** produces a product.

2. **Pairs/Pears** are things that go together.

3. The least common **multiple/factor** is the smallest number that is the multiple of two or more other numbers.

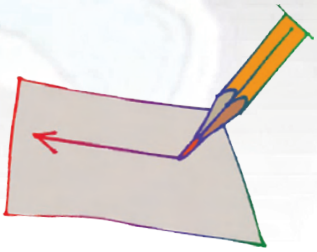
4. The greatest common **factor/property** is the biggest number that will divide into two or more other numbers exactly.

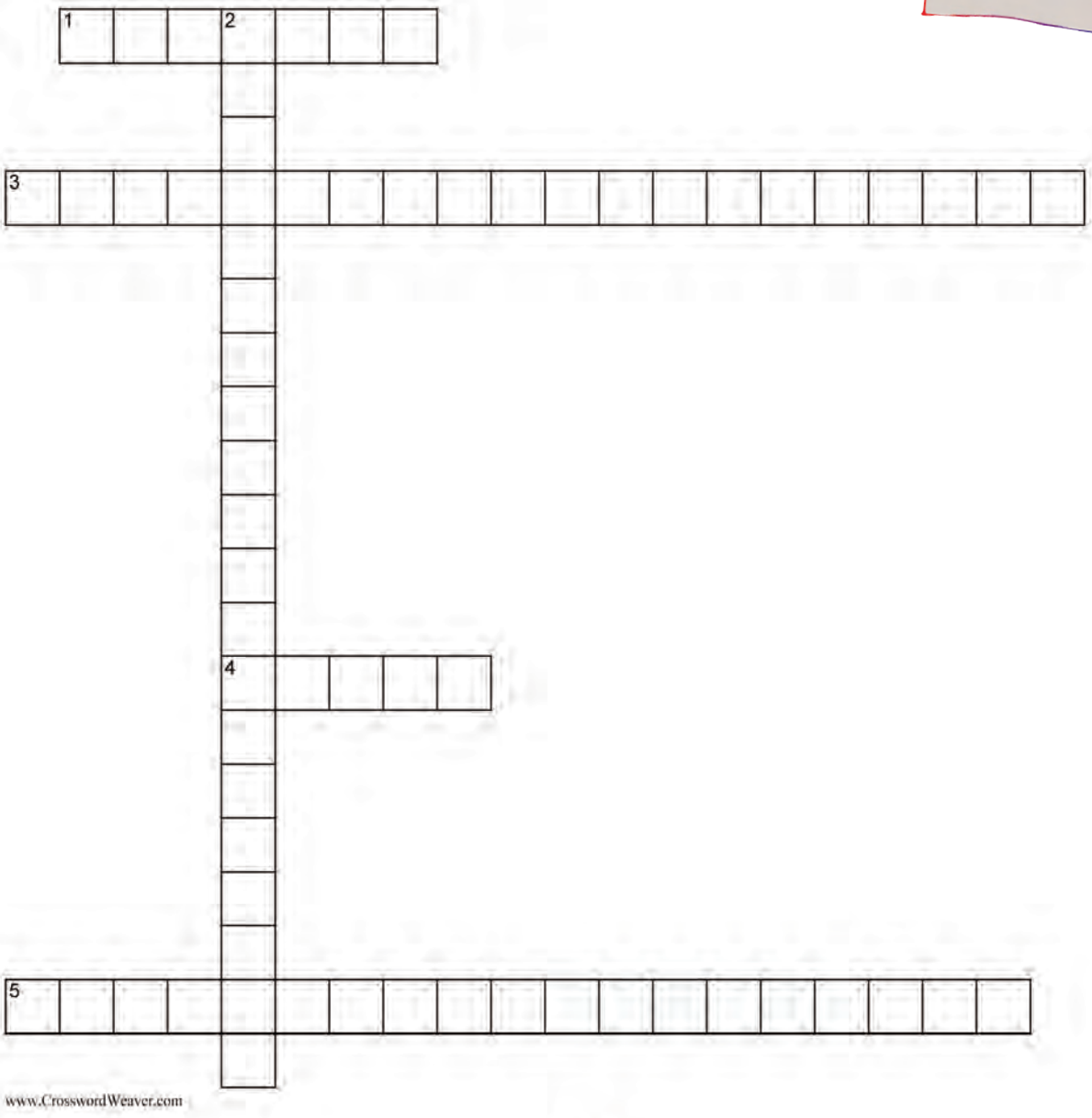
5. The **distributive/associative** property states that multiplying a number is the same as multiplying the addends by the number and then adding the products.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





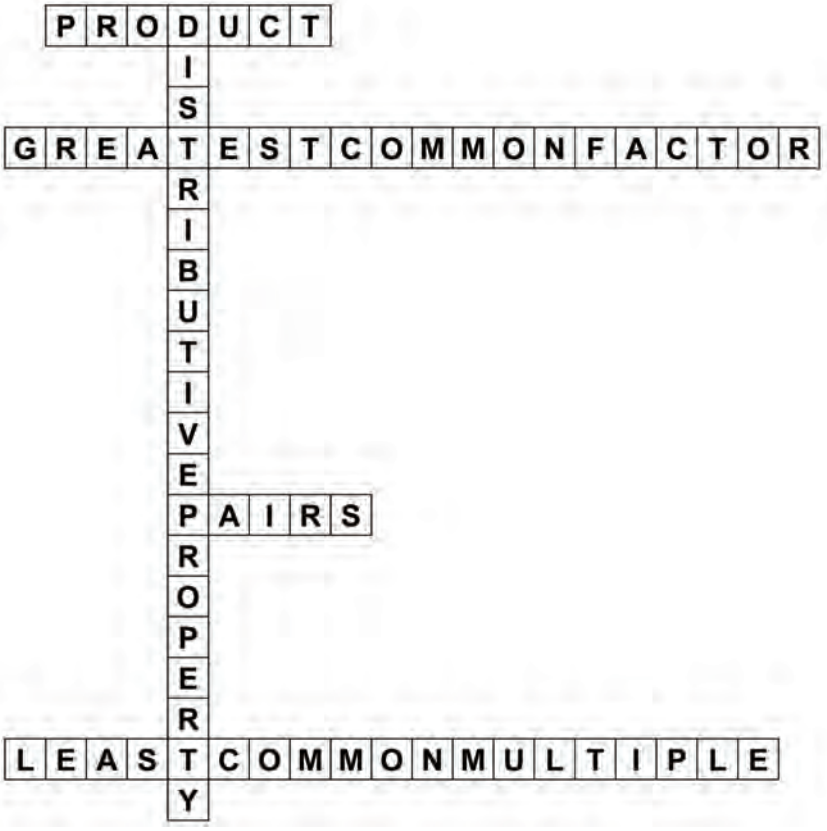
ACROSS

1 The result when two numbers are multiplied.
3 The largest number that will divide two or more other numbers exactly.
4 Two things that belong together.
5 The smallest number that is the multiple of two or more other numbers.

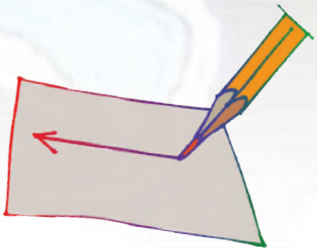
DOWN

2 This is when you multiply the addends of a number and then add its products.

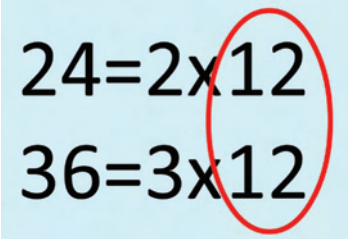
Crossword Puzzle Answers



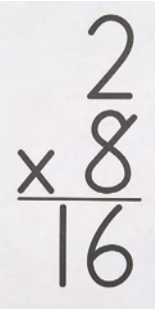
Basic Writing Activity Page



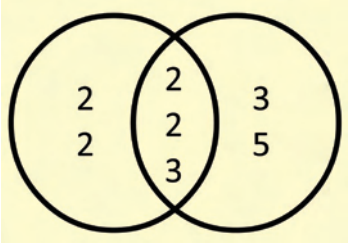
Have the students write the word for each picture.



_____

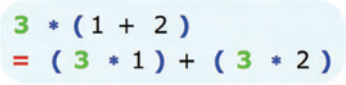


_____



_____

_____



_____

UNIT ASSESSMENT

Teacher note: When using the Developmental Language Process in math, listening comprehension and creative writing are not always used. However, we have included these skills in this assessment. It is your decision as to whether or not to include them in the unit's assessment.

MATH PROGRAM

Unit Assessment Teacher's Notes
Grade 6 • Unit 10

Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **PRODUCT**.
2. Write the number 2 on top of the picture for **PAIRS**.
3. Write the number 3 on top of the picture for **LEAST COMMON MULTIPLE**.
4. Write the number 4 on top of the picture for **GREATEST COMMON FACTOR**.
5. Write the number 5 on top of the picture for **DISTRIBUTIVE PROPERTY**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. A product is the answer to an addition problem.
2. Pairs are things that belong together or go together.
3. The least common multiple is the smallest number that is the multiple of two or more other numbers.
4. The greatest common factor if the smallest number that will divide exactly into two or more other numbers.
5. The distributive property says that multiplying a number is the same as subtracting them.
6. 5. Addition and subtraction are inverse operations.

SIGHT RECOGNITION

Turn to page 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

DECODING/ENCODING

Turn to page 4 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

READING COMPREHENSION

Turn to page 5 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 6 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 7 in your test. Write a sentence of your own, using each word.

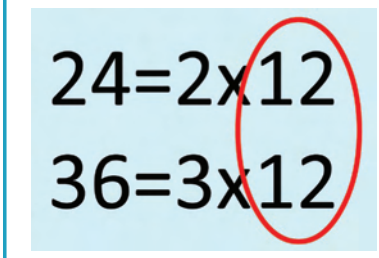
Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

MATH PROGRAM

Unit Assessment Student Pages
Grade 6 • Unit 10

Date:_____ **Student's Name:_____**

Number Correct:_____ **Percent Correct:_____**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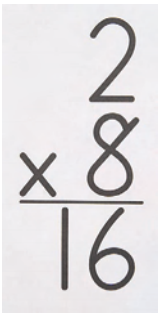
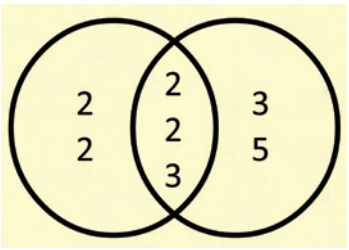
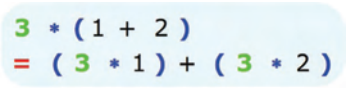
36=3x12


2
x 8
16


2
2
2
2
3
3
5


3 * (1 + 2)
= (3 * 1) + (3 * 2)

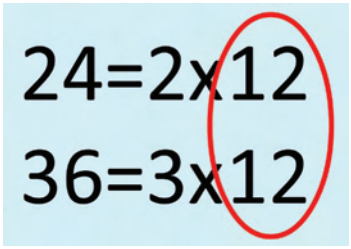
1. T F

2. T F

3. T F

4. T F

5. T F



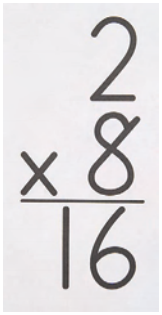
product

pairs

least common multiple

greatest common factor

distributive property



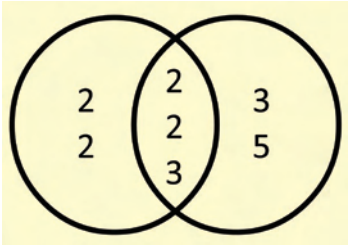
product

pairs

least common multiple

greatest common factor

distributive property



product

pairs

least common multiple

greatest common factor

distributive property

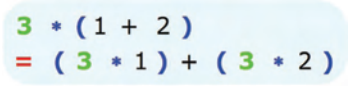
product

pairs

least common multiple

greatest common factor

distributive property



product

pairs

least common multiple

greatest common factor

distributive property

pro

- dekt
- dict
- dact
- duct
- tuct
- oduct
- doct
- oct
- ect

pa

- ers
- urs
- ors
- irs
- rs
- or
- nor
- ears
- oars

least common mul

- taple
- tuple
- tiple
- aple
- iple
- ltiple
- le
- oal
- diple

greatest common

- factur
- factir
- facture
- fictar
- actor
- ictor
- factor
- foctar
- tar

distributive pro

- purty
- erty
- ty
- pirty
- perty
- party
- rty
- arty
- porty

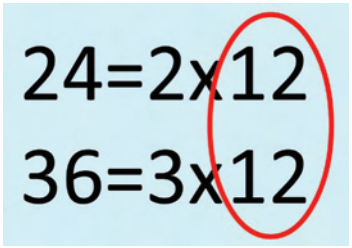
1. Which of these shows a product?
   - ❍ 4+4=8
   - ❍ 2x3=6
   - ❍ 7-4=3

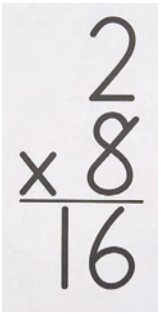
2. Which of these can be a pair?
   - ❍ nominators
   - ❍ integers
   - ❍ denominators

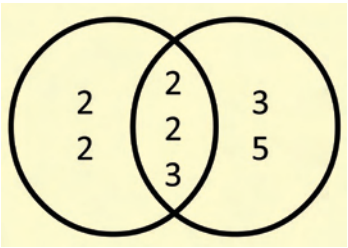
3. What is the least common multiple?
   - ❍ the smallest multiple of two or more other numbers
   - ❍ the largest multiple of two or more other numbers
   - ❍ equivalent multiples in a fraction

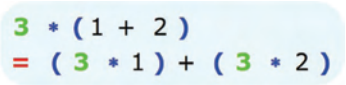
4. What is the greatest common factor?
   - ❍ the largest number that will divide two or more other numbers
   - ❍ the largest number that can be added to a fraction
   - ❍ an integer that is less than 0

5. What is the distributive property?
   - ❍ Addition is the inverse of subtraction.
   - ❍ An integer can be multiplied by an odd number to make an even number.
   - ❍ You can multiply the addends of a number and then add its product.


24=2x12
36=3x12


2
x 8
16


2
2
2
2
3
3
5


3 * (1 + 2)
= (3 * 1) + (3 * 2)

PRODUCT

_____

PAIRS

_____

LEAST COMMON MULTIPLE

_____

GREATEST COMMON FACTOR

_____

DISTRIBUTIVE PROPERTY

_____