UNIT 3
Numeration

Note: All key terms are based on the Math Standards for Alaska and reflect terms vital to academic achievement in math.

Alaskan Math Standards (GLE's) for This Unit

These Alaskan math standards underly the language development of the unit. Many of these standards are addressed during the regular math program and in the concrete introduction of the key vocabulary words for the unit.

The student demonstrates understanding of rational numbers (fractions, decimals, percents, or integers) by

[7] N-1 ordering rational numbers (M1.3.1)

[7] N-2 modeling (place value blocks) or identifying place value positions of whole numbers and decimals (L) (M1.3.2)

[7] N-3 converting between expanded notation (multiples of ten) and standard form for decimal numbers (M1.3.3)

Of positive fractions, decimals, or percents by

[7] N-4 identifying or representing equivalents of numbers (M1.3.4 & M3.3.5)

The student demonstrates conceptual understanding of number theory by

[7] N-6 using commutative, [associative L], inverse, or identity properties with rational numbers (M1.3.6)

[7] N-7 applying rules of divisibility to whole numbers (M1.3.5)

[7] N-8 identifying prime and composite numbers (M1.3.5)

[7] N-9 [using distributive property with rational numbers L] (M1.3.6)

Alaskan Language Standards (GLE's) for This Unit

AK.R.3.1. Reading: The student uses strategies to decode or comprehend the meaning of words in texts. (E.B.1)

[7] 3.2.2. Reading aloud short factual information (e.g., reports, articles) (L)

AK.R.3.3. Reading: The student restates/summarizes and connects information. (E.B.3)

AK.R.3.5. Reading: The student follows written directions. (E.C.2)

[7] 3.5.1. Completing a task by following written, multi-step directions (e.g., answer a multi-faceted text question) (L)

[7] 3.5.2. Identifying the sequence of steps in a list of directions (e.g., what is the first step, what is the second step)

[7] 3.3.4. Applying rules of capitalization (e.g., titles and proper nouns)

AK.W.3.4. Writing: The student revises writing. (E.A.5, E.A.8)

AK.E.A. A student should be able to speak and write well for a variety of purposes and audiences. A student who meets the content standard should

E.A.1. Apply elements of effective writing and speaking. These elements include ideas, organization, vocabulary, sentence structure, and personal style.

E.A.2. In writing, demonstrate skills in sentence and paragraph structure, including grammar, spelling, capitalization, and punctuation.

E.A.3. In speaking, demonstrate skills in volume, intonation, and clarity.

INTRODUCTION OF MATH VOCABULARY

Numeration

Concrete Introduction of Key Vocabulary
Note: *A vocabulary graphic is provided in this unit for each of the key words.*
Definitions for all of the key words can be found in the glossary at the back of this program.

MULTIPLICATIVE

Fill 5 or 6 paper bags with varying numbers of cookies (i.e. 1, 4, 6, etc.). Use these to introduce the multiplicative property--each bag represents "1" x the number of cookies in the bag (1x1=1, 1x4=4, etc.). The students should understand that any number multiplied by 1 equals that number.

INVERSE

Collect concrete materials that are opposites — black/white, big/small, etc. Use these to introduce inverse properties in math (i.e. adding/subtracting).

ADDITIVE INVERSE

Show the students a made-up bank statement. The statement should show that you are 1 dollar overdrawn in your account (-1). Show a dollar bill. Have the students determine your balance when you deposit the dollar (-1+1=0). Use this to introduce additive inverse to the students.

Numeration

Concrete Introduction of Key Vocabulary
Note: *A vocabulary graphic is provided in this unit for each of the key words. Definitions for all of the key words can be found in the glossary at the back of this program.*

DIVISIBLE

Show the students a jigsaw puzzle and a photograph. Have the students compare/contrast the two. Lead the students to realize that the jigsaw puzzle is divisible and the photo is not. Relate indivisible to its use in the Pledge of Allegiance. Relate divisible to its mathematical concept.

COMPOSITE

Show the students a pizza or a picture of a pizza. Present them with a pizza cutter. Lead them to suggest that the pizza cutter can be used to divide the pizza into individual slices. The students should understand that the pizza can be cut into different numbers of slices. Use this to introduce composite numbers (i.e. 9 can be divided by 1, 3, and 9).

PRIME

The students should understand that there are composite and prime numbers and that they are different. Show a carton of 12 eggs. Then, show one more egg — it won't fit into the carton. Relate the 12 eggs to 13 eggs in terms of 12 as a composite number (can be divided by 1, 2, 3, etc.) and 13 as a prime number (can be divided by 1 and 13). All numbers are either composite or prime.

Numeration

Concrete Introduction of Key Vocabulary
Note: *A vocabulary graphic is provided in this unit for each of the key words. Definitions for all of the key words can be found in the glossary at the back of this program.*

SUM

Collect all of the items necessary to make a sandwich. Lay out the ingredients (il.e. bread + butter + jam + peanut butter). Put an = sign at the end of the materials and a complete sandwich - use the sandwich to represent the sum of all the ingredients. Relate this to addition sums in math.

EXPRESSION

Place yeast, flour, water, salt and sugar on a table. Encourage the students to tell you what can be made with the ingredients (bread). Use this as an analogy for a math expression (i.e. all of the ingredients can produce bread, just as a math expression can produce an answer (sum, product, etc.).

NUMERAL

Write a number word on the board. Have a student write its numeral (i.e. two : 2). The students should realize that numeral is the name for the symbols that represent numbers.

Numeration

Concrete Introduction of Key Vocabulary
Note: *A vocabulary graphic is provided in this unit for each of the key words. Definitions for all of the key words can be found in the glossary at the back of this program.*

DIGIT

Draw an outline of a car on the board, omitting the license plate. Direct the students' attention to the drawing, calling upon them to determine what is missing. When they name the license plate as missing, add it to the drawing — showing the digits in it, using any digits from 0 to 9. Relate "digit" to digital watches.

VOCABULARY PICTURES

MULTIPLICATIVE

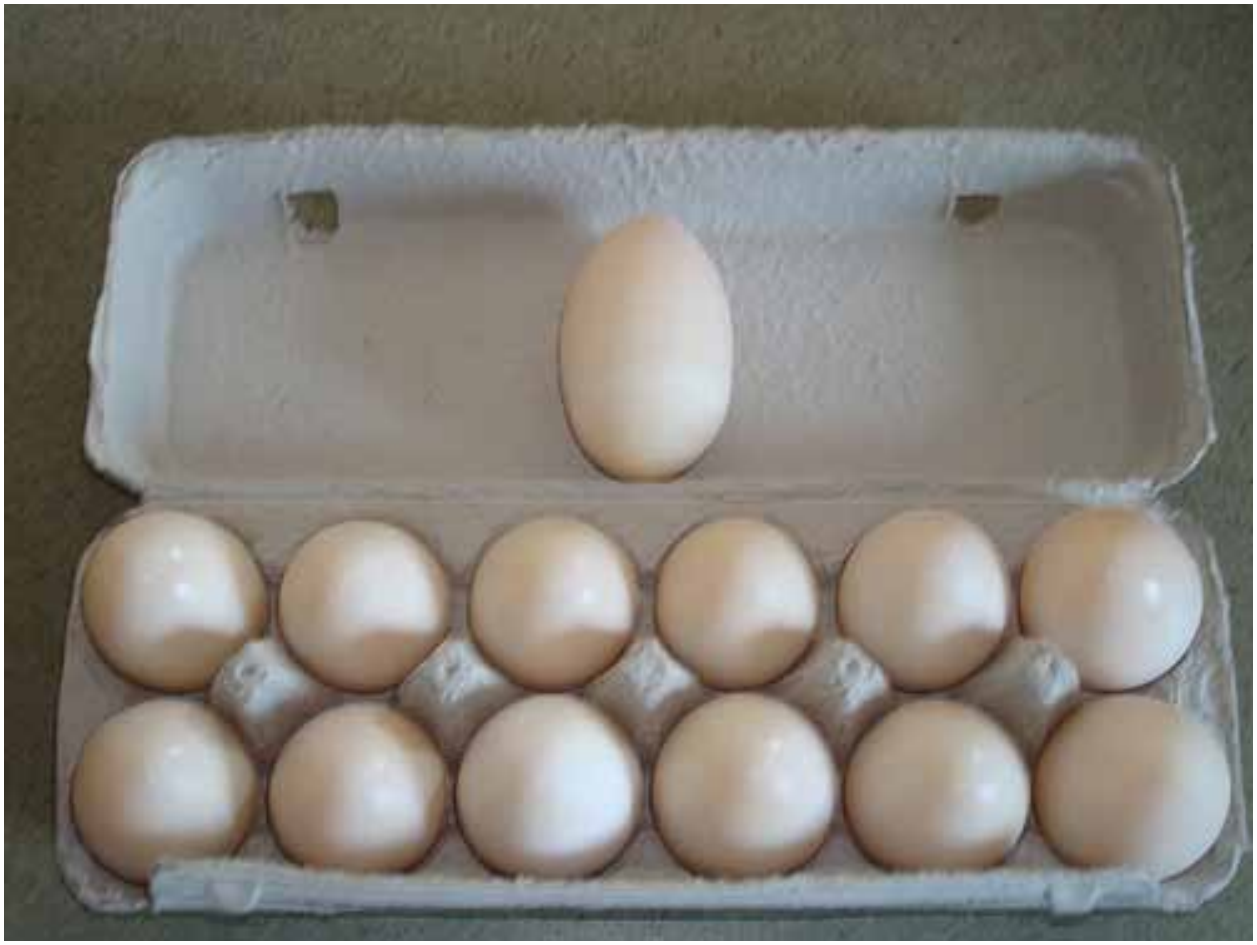
INVERSE

$$5 + -5 = 0$$

ADDITIVE INVERSE

DIVISIBLE

COMPOSITE



PRIME

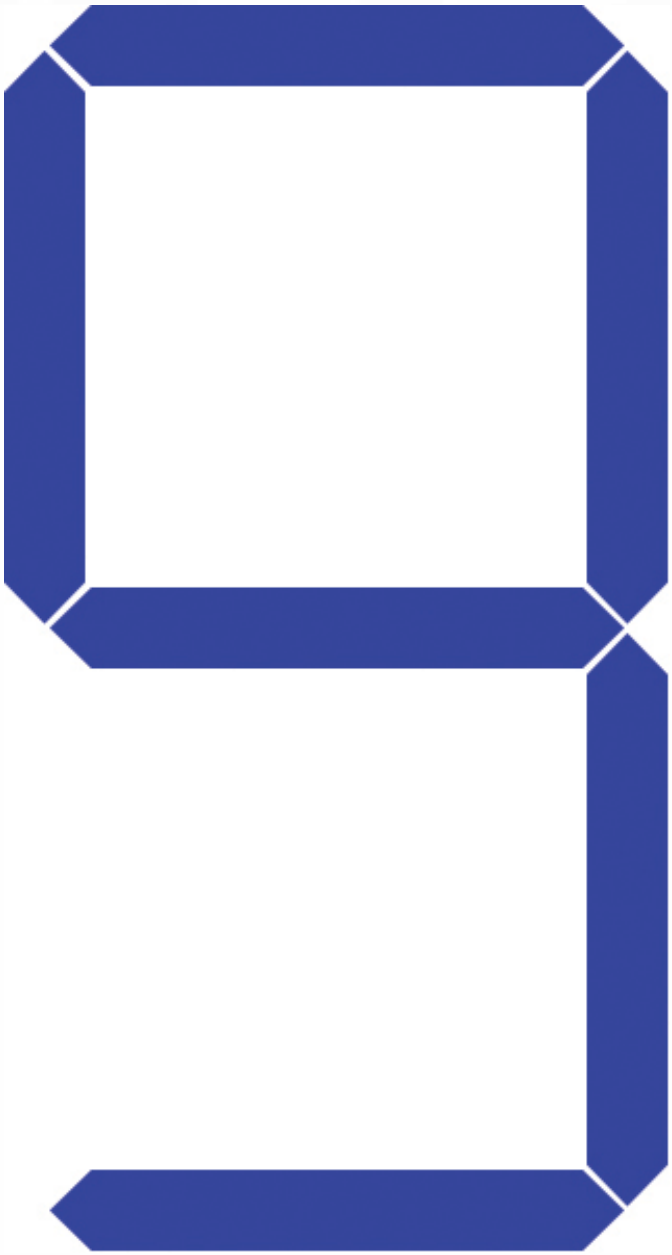
SUM


Farine
de blé
AB
Bio
Béghin
Say
ONVILLIERS
POUDRE
Karo
& HAMMER
Pure
ing Soda
RUMFORD
Premium Aluminum Free
BAKING
POWDER
Nature

EXPRESSION


5

NUMERAL



DIGIT

LANGUAGE ACTIVITIES

Language and Skills Development

LISTENING

Review the key math words introduced in this unit. If the vocabulary pictures were not presented during the introduction, show them to the students at this time.

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.

Knock Knees

Mount the vocabulary pictures on the board. Group the students into two teams. Give a small, hard ball to the first player in each team. The first player in each team must place the ball between his/her knees. Say a vocabulary word. When you say "Go," the two players must then walk to the pictures without losing the balls. The first player to reach the vocabulary pictures and identify the picture for the word you said wins the round. If a player loses his/her ball, he/she must return to his/her team and begin again. Repeat until all players have played.

Over and Under

Group the students into two teams. Mount the vocabulary pictures on the board. Give the first player in each team a ball. When you say, "Go," the first player in each team must pass the ball to the next player, over his/her head. The next player must then pass the ball to the third player, between his/her legs. The players should continue with this over/under sequence until the last player in a team receives the ball. When the last player receives the ball, he/she must rush to the board and identify a picture for a vocabulary word that you say. The first player to do this successfully wins the round. Repeat until all players in each team have had a chance to respond in this way.

All in Knots

Group the students into two teams. Tie two lengths of rope in a knot (use the same knot for each rope). Skipping ropes are ideal for this activity. Mount the vocabulary graphics on the board. Give a knotted rope to the first player in each team. Say a vocabulary word. When you say "Go," the first player in each team must then attempt to untie the knot he/she has. The first player who unties his/her knot, rushes to the board, and identifies the vocabulary graphic for the word you said, wins the round. Repeat until all players have participated.

Language and Skills Development

Stare

Have two students stand, facing one another. Mount the vocabulary graphics on the board and number them. The object of the activity is for the two students to look at each other without laughing. The first student to laugh must then identify a vocabulary picture by a number from the board. If both students laugh, then both students must identify a vocabulary picture for the numbers you say from the board. Repeat with other pairs of students.

Pencil of Fortune

Before the activity begins, prepare a stencil that contains small versions of the vocabulary graphics. Provide each student with a copy of the stencil. Each student should cut out his/her graphics. The students should then lay the graphics on their desks (around the edges of their desks). When the students have arranged their graphics in this way, each student should then place a pen or pencil in the center of his/her desk. Say a vocabulary word. The students should then spin their pencils/pens on their desks. When the pencils/pens stop spinning, any student or students whose pencils/pens are pointing to the vocabulary picture for the word you said win(s) the round, and he/she may remove that picture from his/her desk. The winner or winners of this activity are those students who have no graphics left on their desks.

Language and Skills Development

SPEAKING

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.

Sheet Golf

Before the activity begins, obtain an old sheet. Cut a hole (approximately two inches in diameter) in each end of the sheet. Group the students into two teams. Have the first player from each team hold opposite ends of the sheet. Place a marble or small ball in the center of the sheet. When you say "Go," the players must then lift their ends of the sheet and attempt to cause the marble or ball to fall through the hole in the other player's side of the sheet. When the ball or marble falls through one of the holes, the player on that side of the sheet must say the name of a vocabulary picture you show or he/she should repeat a sentence you said at the beginning of the round. Repeat with other pairs of students until all students have participated. If the sheet is large enough, all students can play—divide the students into four groups (one group for each side). Cut a hole in the sheet near each side. When the marble or ball falls through, all the players on that side must say the name of a vocabulary picture that you show. Repeat.

Visual Memory

Mount the 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

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.

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."

Flashlight Name

Mount the vocabulary pictures on the board and the walls of the classroom. Darken the classroom as much as possible. Use a strong flashlight to direct the students' attention to one of the pictures. The students should identify the picture that is illuminated by the light of the flashlight. Continue in this way until all of the vocabulary words have been said a number of times.

Language and Skills Development

READING

Introduce the math sight words to the students — match the sight words with the vocabulary graphics. The sight words are included in the Student Support Materials, attached to these lesson plans.

Sight Recognition

Elbow Lock

Group the students into pairs. There should be one student without a partner to be IT during the first round of the activity. Mount a set of sight words on the board. Have the students in each pair stand back to back, with elbows interlocked. Say one of the sight words. Tell the students to listen for that word. Then say a number of vocabulary words, eventually repeating the sight word you said at the beginning of the round. At that point, the students should drop arms and find new partners. However, IT must also find a partner, thus producing a new IT for the next round of the activity. Give the new IT a sight word card and he/she must read it to you. Repeat until many students have responded and until all sight words have been read a number of times.

Sight Word Bingo

Before the activity begins, prepare a page that contains the sight words. Provide each student with a copy of the page. The students should cut out the sight words. When the students have cut out their sight words, each student should lay all of the sight words, but one, face down on his/her desk. Show a vocabulary picture. Any student or students who have the sight word for that picture face-up on their desks should show the sight word to you. Then, those sight words should be placed to the side and other sight words turned over in their place. Continue in this way until a student or students have no sight words left on their desks.

Student Support Materials

Have the students complete the sight recognition and encoding activities in the Student Support Materials. When finished, review their work.

Language and Skills Development

Decoding/Encoding

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.

Half Time Concentration
Before the activity begins, cut each of the sight words in half. Mix all of the word halves together and spread them on the floor, face down. Group the students around the word halves. Call upon a student to select one of the word halves. The student should show that word half to the other students. Then, the student should take another word half. The student should show that word half to the other students. If the two word halves go together to create a sight word, the student should keep the two halves. However, if the two halves do not go together, he/she should place them in their original locations on the floor. Continue in this way until all of the sight word cards have been encoded correctly. The winner or winners of this activity are those students who collect the greatest number of sight words.

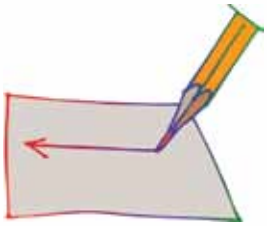
Student Support Materials
Have the students complete the sight recognition and encoding activities in the Student Support Materials. When finished, review their work.

Reading Comprehension

Student Support Materials
Have the students complete the sight recognition and encoding activities in the Student Support Materials. When finished, review their work.

Language and Skills Development

WRITING



Flashlight Writing

If possible, darken the classroom. Give a student a flashlight. Say one of the vocabulary words and the student should write that word with the light of the flashlight on a wall or on the board. Repeat until many students have had a chance to participate. An alternative is to provide each student with writing paper and a pen. Darken the classroom, if possible. Use the light of a flashlight to write one of the sight words on the wall or board. When you have completed the writing of the word, each student should then write the same word on his/her sheet of paper. Repeat until all sight words have been written in this way.

This activity may also be done in team form. In this case, group the students into two teams. Darken the classroom. Use the light of a flashlight to write one of the sight words on the board. When you say "Go," the first player in each team should rush to the board and use chalk to write the same word on the board. The first player to do this correctly wins the round. Repeat until all players have played.

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.

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.

Language and Skills Development

Over/Under Picture

Group the students into two teams. Give a vocabulary picture to the first player in each team. When you say "Go," the first player in each team must pass the picture over his/her head to the next player. The second player in each team must then pass the picture to the next player between his/her legs. The students should continue with this over/under sequence until the last player in the team receives the picture. When the last player in the team receives the picture, he/she must rush to the board and write the vocabulary word for that picture. The first player to do this successfully wins the round. Repeat until all players have played (each picture can be used a number of times in this activity).

Student Support Materials

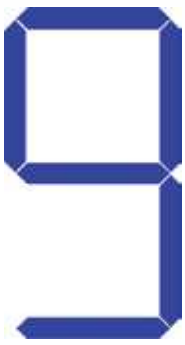
Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

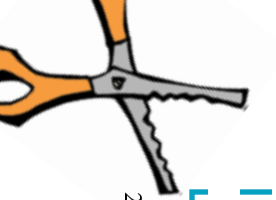
Listening: Mini Pictures

Have the students cut out the pictures. Say the key math words from this unit, and the students should hold up the pictures for them.



STUDENT SUPPORT MATERIALS

Sight Words



multiplicative

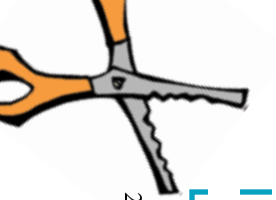
inverse

additive inverse

divisible

composite

prime



sum

expression

numeral

digit

STUDENT SUPPORT MATERIALS

Reading • Sight Recognition

Sight Words Activity Page

Have the students circle the word for each picture.

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
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digit

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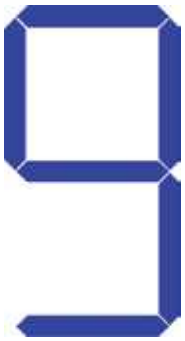
composite
prime
sum
expression
numeral
digit



multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

Sight Words Activity Page

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

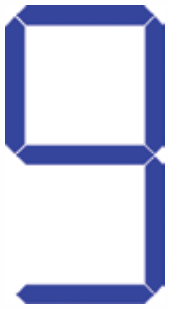
multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

Sight Words Activity Page

Write the numbers on their correct vocabulary graphics.



1. **multiplicative**
2. **inverse**
3. **additive inverse**
4. **divisible**
5. **composite**
6. **prime**
7. **sum**
8. **expression**
9. **numeral**
10. **digit**

Sight Words Activity Page

Write the key words from this unit horizontally in the boxes (more than one copy of each word can be written). Fill in all other boxes with any letters. Exchange page with another student. Find key words and circle.

Sight Words Activity Page

Highlight or circle the words in this word find.

additive inverse
numeral
divisible
composite
expression
prime
multiplicative
inverse
digit
sum

i	t	v	e	t	t	e	n	u	m	e	r	a	l	n	n	i	x
u	l	v	i	c	o	m	p	o	s	d	i	g	i	t	r	s	e
m	n	a	u	p	v	t	e	x	p	r	e	s	s	i	o	n	e
m	e	p	p	r	m	p	e	x	a	m	i	o	v	r	e	u	d
d	i	v	i	s	i	b	l	e	p	l	i	m	p	s	i	e	n
g	t	c	d	i	v	i	s	i	b	i	n	u	i	t	o	o	e
d	m	i	n	u	m	e	r	i	i	d	p	r	i	m	e	e	g
i	i	i	u	l	e	c	r	x	e	r	r	d	s	i	n	v	e
p	c	o	m	p	o	s	i	t	e	m	i	r	r	o	i	i	s
d	l	v	d	r	e	e	u	e	n	m	i	l	t	i	m	p	e
s	l	e	e	a	a	v	s	m	d	i	e	i	e	n	i	l	s
m	u	l	t	i	p	l	i	c	a	t	i	v	e	d	e	d	e
s	v	e	r	e	m	s	i	u	r	t	p	x	d	d	t	r	m
d	i	g	i	i	t	s	a	r	v	o	i	p	m	o	d	n	n
t	i	e	x	p	r	e	s	s	l	s	u	m	i	c	r	i	v
e	a	d	d	i	t	i	v	e	i	n	v	e	d	e	i	e	u
r	x	m	u	l	t	i	p	l	i	c	a	t	i	v	t	p	g
d	m	a	d	d	i	t	i	v	e	i	n	v	e	r	s	e	i
i	d	i	a	e	g	r	d	i	i	n	v	e	r	s	e	n	i
e	n	a	n	l	l	e	i	m	i	e	i	r	i	u	n	i	i

Sight Words Activity Page

ANSWER KEY

additive inverse
numeral
divisible
composite
expression
prime
multiplicative
inverse
digit
sum

i t v e t t e **n u m e r a l** n n i x
u l v i c o m p o s **d i g i t** r s e
m n a u p v t **e x p r e s s i o n** e
m e p p r m p e x a m i o v r e u d
d i v i s i b l e p l i m p s i e n
g t c d i v i s i b i n u i t o o e
d m i n u m e r i i d **p r i m e** e g
i i i u l e c r x e r r d s i n v e
p **c o m p o s i t e** m i r r o i i s
d l v d r e e u e n m i l t i m p e
s l e e a a v s m d i e i e n i l s
m u l t i p l i c a t i v e d e d e
s v e r e m s i u r t p x d d t r m
d i g i i t s a r v o i p m o d n n
t i e x p r e s s l **s u m** i c r i v
e a d d i t i v e i n v e d e i e u
r x m u l t i p l i c a t i v t p g
d m **a d d i t i v e i n v e r s e** i
i d i a e g r d i **i n v e r s e** n i
e n a n l l e i m i e i r i u n i i

STUDENT SUPPORT MATERIALS

Reading • Encoding

Encoding Activity Page

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

mul_____tive

in_____se

ad_____tive inverse

divi_____ble

com_____site

si	po	pr
di	um	

Encoding Activity Page

_____ime

s_____

ex_____sion

nu_____al

di_____

tiplica	pres	mer
ver	git	

Encoding Activity Page

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

multipli	**ible**
in	**um**
addi	**al**
divis	**verse**
compo	**sion**

Encoding Activity Page

pr	cative
s	site
expres	git
numer	tive inverse
di	ime

Encoding Activity Page

Cut out and encode the syllables of the words OR number the syllables in their correct sequence.

ti	mul	ca	pli
_____	_____	_____	_____

tive
_____

si	vi	ble	di
_____	_____	_____	_____

Encoding Activity Page

di	tive	ad	verse

in

site	com	po

STUDENT SUPPORT MATERIALS

Reading Comprehension

What's the Answer?

Read the text and then select the correct answer for it. Fill in the bullet beside the answer of your choice.

1. 1. The multiplicative property says that
   - ❍ the product is always a prime number.
   - ❍ the product is always a composite number.
   - ❍ the product of any number and 1 is that number.
   - ❍ an expression must have two prime numbers.

2. Addition and subtraction are
   - ❍ prime numbers.
   - ❍ inverse functions.
   - ❍ properties of composite numbers.
   - ❍ decimals that show tenths.

3. The additive function is when
   - ❍ you get a sum that is a prime number.
   - ❍ you get a sum that is a composite number.
   - ❍ you add numbers to get 0.
   - ❍ you add numbers with fractions.

4. Divisible means that a number can
   - ❍ be divided only A by prime numbers.
   - ❍ be divided only by composite numbers.
   - ❍ be the sum of all its numbers.
   - ❍ be divided evenly.

5. A composite number
   - ❍ can be divided by numbers besides 1 and itself.
   - ❍ lcan be divided by 1 and itself.
   - ❍ cannot be divided by prime numbers.
   - ❍ cannot be divided by composite numbers.

6. A prime number can be
   - ❍ divided by prime numbers only.
   - ❍ divided by composite numbers only.
   - ❍ divided by 1 and itself.
   - ❍ divided by many numbers.

What's the Answer?

7 A sum is
- ❍ the answer to a subtraction A expression.
- ❍ the answer to a multiplication expression.
- ❍ the answer to a division expression.
- ❍ the answer to an addition expression.

8 A mathematical expression
- ❍ always shows the percent of something.
- ❍ shows the value of something.
- ❍ always has a decimal in it.
- ❍ always shows the prime numbers.

9 A numeral is
- ❍ always one digit long.
- ❍ the property of a prime number.
- ❍ always a composite number.
- ❍ a symbol that stands for a number.

10 Numerals always have
- ❍ decimals.
- ❍ percents.
- ❍ digits.
- ❍ sums.

What's the Answer?

ANSWER KEY

1. 1. The multiplicative property says that
   - ❍ the product is always a prime number.
   - ❍ the product is always a composite number.
   - ● the product of any number and 1 is that number.
   - ❍ an expression must have two prime numbers.

2. Addition and subtraction are
   - ❍ prime numbers.
   - ● inverse functions.
   - ❍ properties of composite numbers.
   - ❍ decimals that show tenths.

3. The additive function is when
   - ❍ you get a sum that is a prime number.
   - ❍ you get a sum that is a composite number.
   - ● you add numbers to get 0.
   - ❍ you add numbers with fractions.

4. Divisible means that a number can
   - ❍ be divided only A by prime numbers.
   - ❍ be divided only by composite numbers.
   - ❍ be the sum of all its numbers.
   - ● be divided evenly.

5. A composite number
   - ● can be divided by numbers besides 1 and itself.
   - ❍ lcan be divided by 1 and itself.
   - ❍ cannot be divided by prime numbers.
   - ❍ cannot be divided by composite numbers.

6. A prime number can be
   - ❍ divided by prime numbers only.
   - ❍ divided by composite numbers only.
   - ● divided by 1 and itself.
   - ❍ divided by many numbers.

What's the Answer?

7 A sum is
- ❍ the answer to a subtraction A expression.
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- ● a symbol that stands for a number.

10 Numerals always have
- ❍ decimals.
- ❍ percents.
- ● digits.
- ❍ sums.

Reading Comprehension Activity Page

Write the numbers/letters for sentence halves that match.

1	The multiplicative 1 property says that	A	show and write numerals.
2	The inverse of addition	B	digits.
3	Adding the additive inverse to a number	C	by more than 1 and itself.
4	Divisible means that a number	D	is subtraction.
5	A composite number can be divided	E	can be divided evenly.
6	A prime number can only be divided	F	the product of any number and 1 is that number.
7	The sum is the answer	G	is a mathematical expression.
8	2 + 3	H	makes a sum of 0.
9	Digits are used to I to	I	to an addition expression.
10	2,3,4,5,6,7,8, and 9 are	J	by 1 and itself.

1→_____ 2→ _____ 3→ _____ 4→ _____

5→ _____ 6→ _____ 7→ _____ 8→ _____

9→ _____ 10→ _____

Reading Comprehension Activity Page

ANSWER KEY

1	The multiplicative 1 property says that	A	show and write numerals.
2	The inverse of addition	B	digits.
3	Adding the additive inverse to a number	C	by more than 1 and itself.
4	Divisible means that a number	D	is subtraction.
5	A composite number can be divided	E	can be divided evenly.
6	A prime number can only be divided	F	the product of any number and 1 is that number.
7	The sum is the answer	G	is a mathematical expression.
8	2 + 3	H	makes a sum of 0.
9	Digits are used to I to	I	to an addition expression.
10	2,3,4,5,6,7,8, and 9 are	J	by 1 and itself.

1→ F 2→ D 3→ H 4→ E

5→ C 6→ J 7→ I 8→ G

9→ A 10→ B

Reading Comprehension Activity Page

Cut out the words and glue them under their definitions.

This property says that the product of any number and 1 is that number.	**Addition and subtraction are examples of this.**	**This inverse process is when you add two numbers to get 0.**
This means that a number can be evenly divided.	**This kind of number can be divided by more than 1 and itself.**	**This kind of number can be divided by 1 and itself.**
This is the answer to an addition expression.	**4x6 is an example of this.**	**354 is an example of this.**
9 is an example of this.		

additive inverse **composite** **multiplicative** **divisible**

inverse **prime** **expression** **sum**

numeral **digit**

Reading Comprehension Activity Page

ANSWER KEY

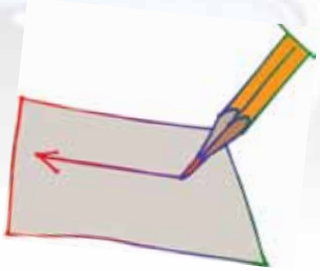
This property says that the product of any number and 1 is that number. multiplicative	**Addition and subtraction are examples of this.** inverse	**This inverse process is when you add two numbers to get 0.** additive inverse
This means that a number can be evenly divided. divisible	**This kind of number can be divided by more than 1 and itself.** composite	**This kind of number can be divided by 1 and itself.** prime
This is the answer to an addition expression. sum	**4x6 is an example of this.** expression	**354 is an example of this.** numeral
9 is an example of this. digit		

STUDENT SUPPORT MATERIALS

Writing

Writing Activity Page

Have the students complete the writing of the key math words.



mul_____pli_____tive

in_____se

addi_____ in_____

di_____ible

compos_____

_____ime

s_____

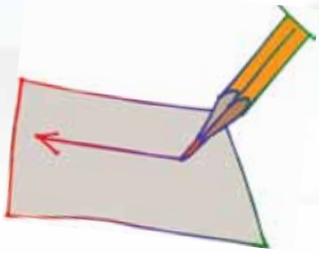
expres_____

nu_____ al

di_____

Writing Activity Page

Have the students complete the writing of the key math words.



m_____**e**

in_____**e**

ad_____**e**

di_____**e**

co_____**e**

p_____**e**

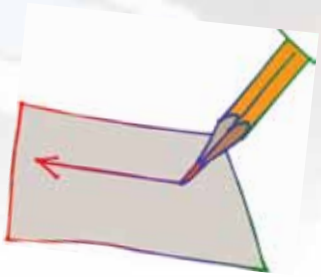
s_____**m**

ex_____**n**

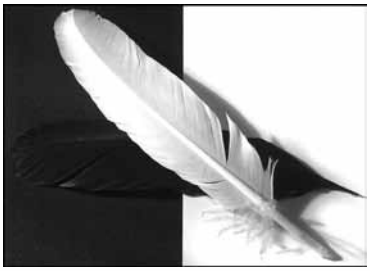
nu_____**l**

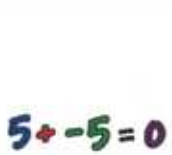
di_____**t**

Basic Writing Activity Page



Have the students write the word for each picture.



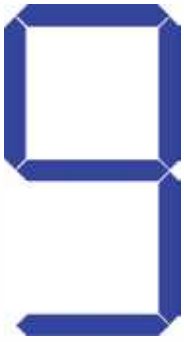


_____ _____ _____

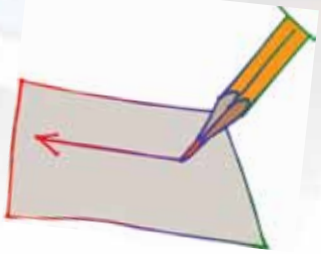
_____ _____ _____

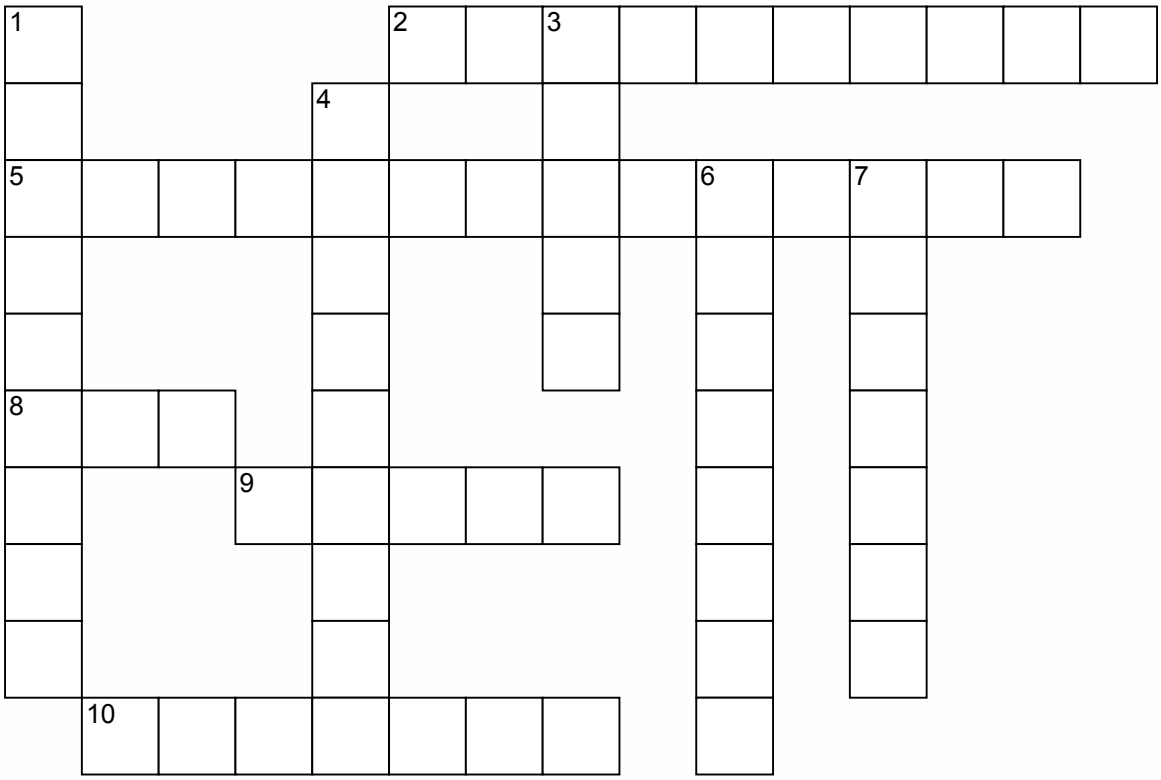
Basic Writing Activity Page

Have the students write the word for each picture.



Crossword Puzzle





www.CrosswordWeaver.com

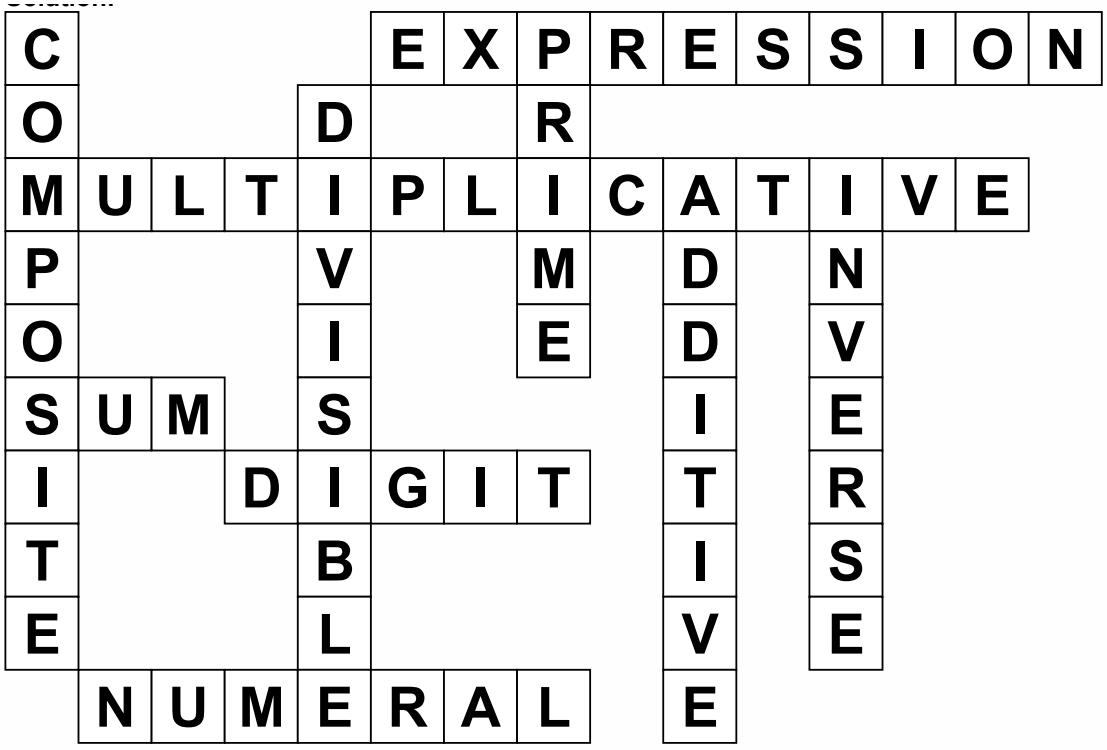
ACROSS

2 4x6 is an example of this.
5 This property says that the product of any number and 1 is that number.
8 Ths is the answer to an addition expression.
9 7 is an example of this.
10 234 is an example of this.

DOWN

1 This kind of number can be divided by more than 1 and itself.
3 This kind of number can be divided by 1 and itself.
4 This means that a number can be evenly divided.
6 This inverse process is when you add two numbers to get 0.
7 Addition and subtraction are examples of this.

Crossword Puzzle Answers



UNIT ASSESSMENT

PROCESS SKILLS

Unit Assessment Teacher's Notes
Grade 7 • Unit 1

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 by the picture for **MULTIPLICATIVE**.
2. Write the number 2 by the picture for **INVERSE**.
3. Write the number 3 by the picture for **ADDITIVE**.
4. Write the number 4 by the picture for **DIVISIBLE**.
5. Write the number 5 by the picture for **COMPOSITE NUMBERS**.
6. Write the number 6 by the picture for **PRIME NUMBERS**.
7. Write the number 7 by the picture for **SUM**.
8. Write the number 8 by the picture for **EXPRESSION**.
9. Write the number 9 by the picture for **NUMERAL**.
10. Write the number 10 by the picture for **DIGIT**.

SIGHT RECOGNITION

Turn to pages 2 and 3 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to pages 4 and 5 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.

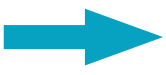
READING COMPREHENSION

Turn to page 6 in your test. Write each word under its definition.
Refer to Student Support Materials for answer key.

BASIC WRITING

Turn to page 7 in your test. Look at the pictures in the boxes. Write the word for each picture.

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

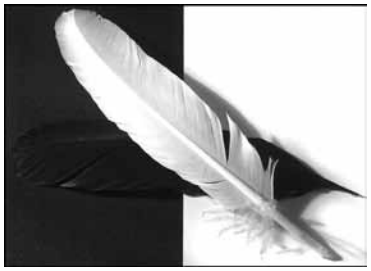
Unit Assessment Student Pages
Grade 7 • Unit 3

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

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

5+-5=0

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit



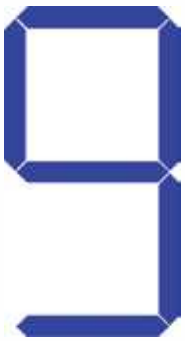
multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit



multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

multiplicative
inverse
additive inverse
divisible
composite
prime
sum
expression
numeral
digit

compo	cative verse tive ible site ime um sion al git
expres	cative verse tive ible site ime um sion al git
pr	cative verse tive ible site ime um sion al git
addi	cative verse tive ible site ime um sion al git
di	cative verse tive ible site ime um sion al git
numer	cative verse tive ible site ime um sion al git

in	cative verse tive ible site ime um sion al git
divis	cative verse tive ible site ime um sion al git
multipli	cative verse tive ible site ime um sion al git
s	cative verse tive ible site ime um sion al git

This property says that the product of any number and 1, is that number.	Addition and subtraction are examples of this.	This inverse process is when you add two numbers to get 0.
This means that a number can be evenly divided.	This kind of number can be divided by more than 1 and itself.	This kind of number can be divided by 1 and itself.
This is the answer to an addition expression.	4x6 is an example of this.	354 is an example of this.
9 is an example of this.		

multiplicative	additive	inverse	divisible
composite	sum	digit	expression
numeral	prime		

9

5 + -5 = 0