



# 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  $\frac{2}{3}$ , 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.

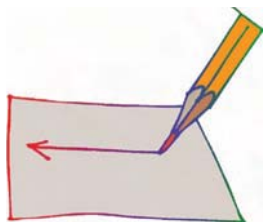
### Back Match

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



## CARDINAL



**5/16**

A blue arrow pointing from the right towards the number 16 in the fraction 5/16.





## DENOMINATOR



# 4 / 2



## NUMERATOR



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



## ORDINAL





**3**  
**/**  
**4**



## PROPER



# STUDENT SUPPORT MATERIALS

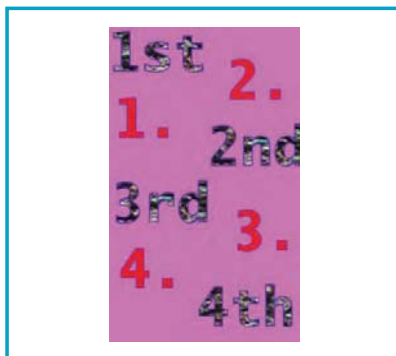
Listening • Mini Pictures

# 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.



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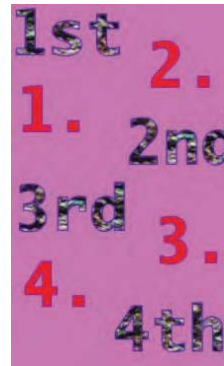


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# Mini Pictures



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.





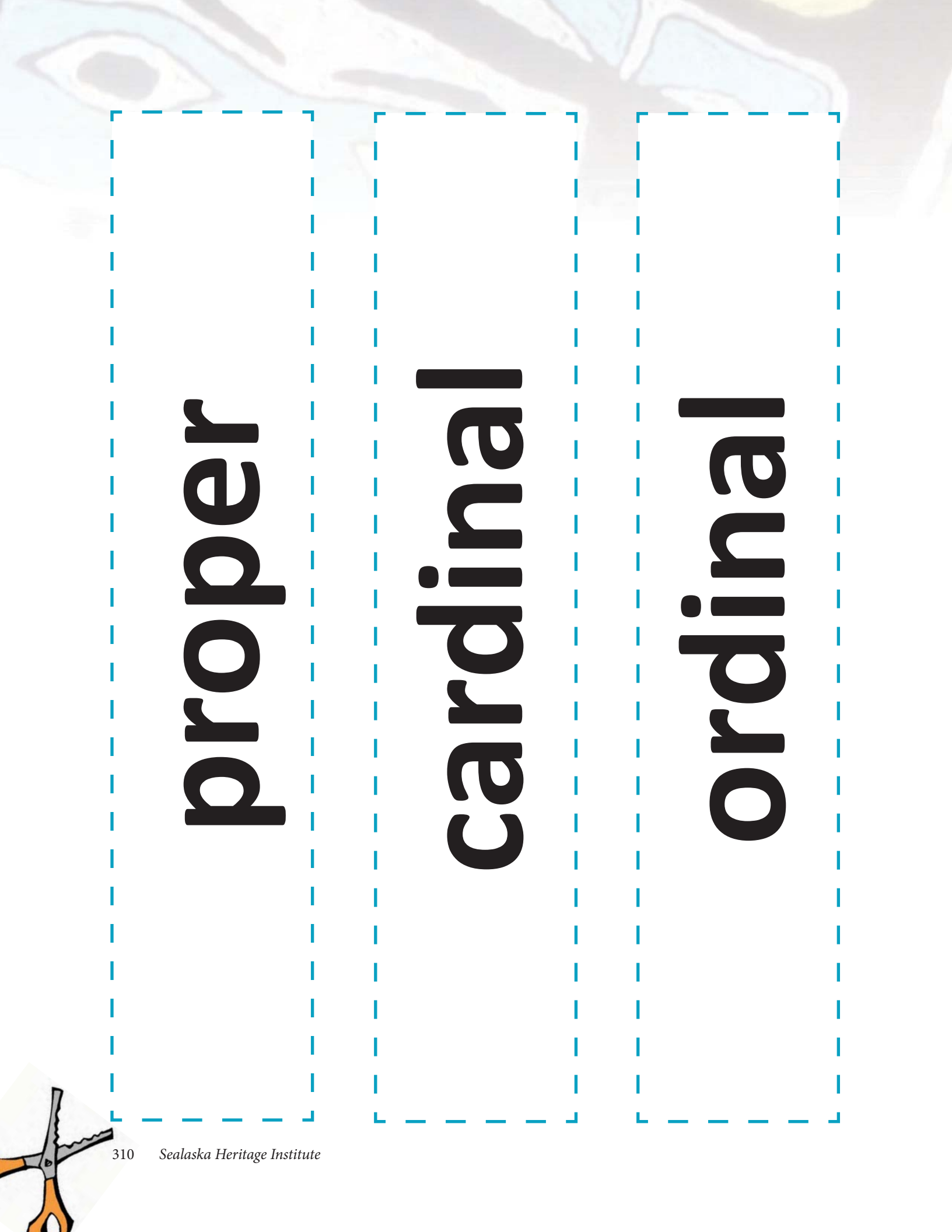




# STUDENT SUPPORT MATERIALS

**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



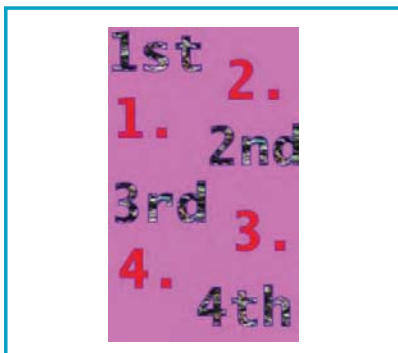
ordinal  
cardinal  
proper  
numerator  
denominator



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.

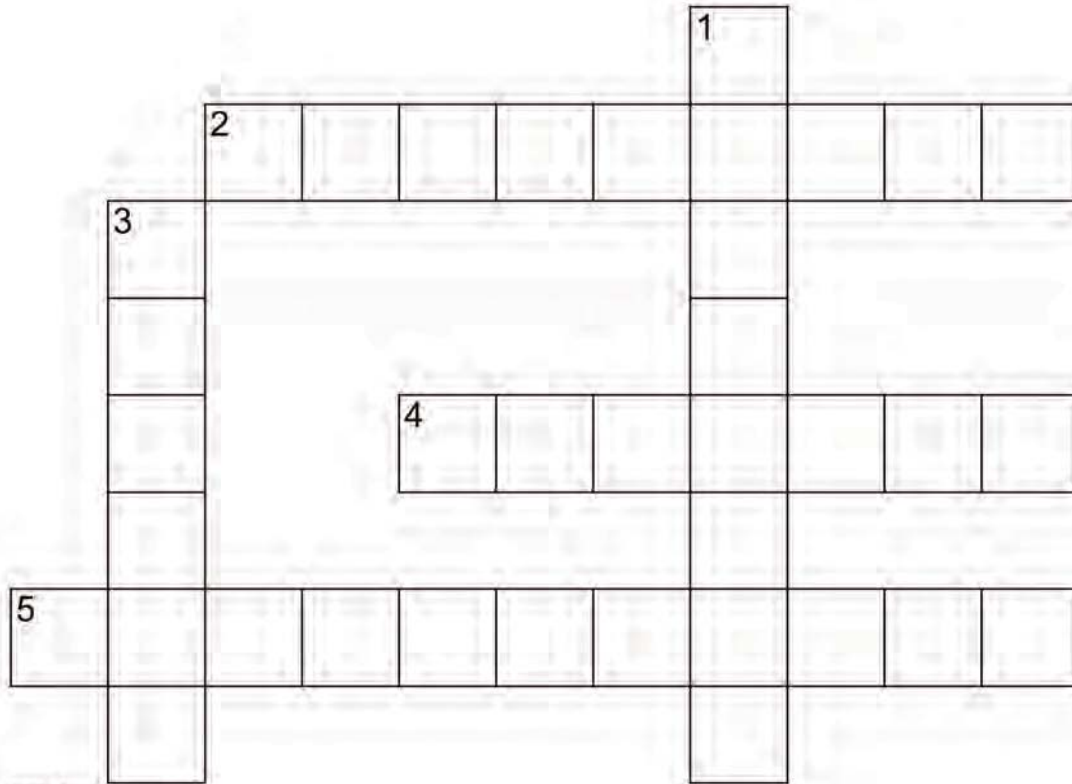
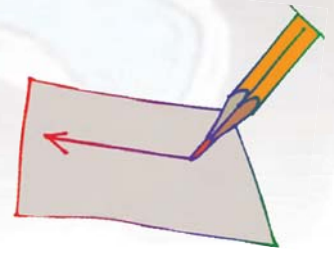




# STUDENT SUPPORT MATERIALS

**Basic Writing**

# Crossword Puzzle



www.CrosswordWeaver.com

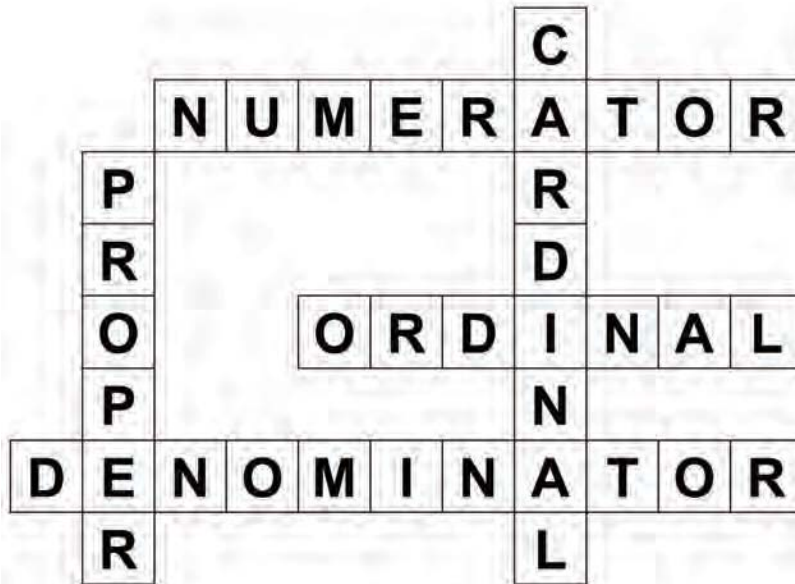
## ACROSS

- 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

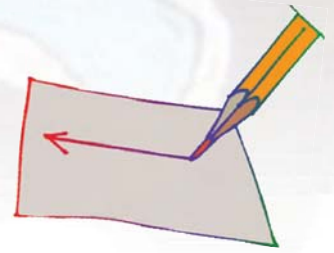
- 1 The number of elements in a set, where the items are counted in order.
- 3 A fraction that is smaller than a whole and the denominator is bigger than the numerator.

# Crossword Puzzle Answers



# Basic Writing Activity Page

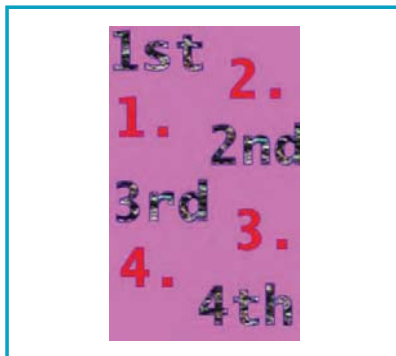
Have the students write the word for each picture.



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# 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: \_\_\_\_\_

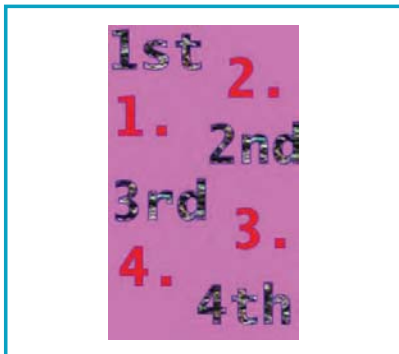
Number Correct: \_\_\_\_\_ Percent Correct: \_\_\_\_\_



$$\frac{4}{2}$$

$$\frac{5}{16}$$

$$\frac{3}{4}$$





1. T F

2. T F

3. T F

4. T F

5. T F





ordinal  
cardinal  
proper  
numerator  
denominator



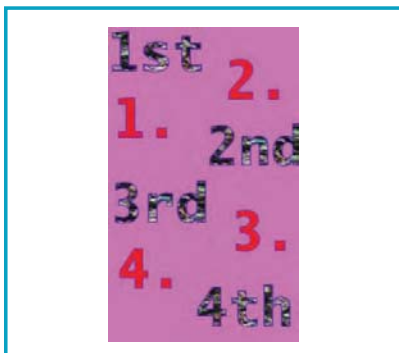
ordinal  
cardinal  
proper  
numerator  
denominator



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?

$1\frac{3}{4}$

$\frac{3}{4}$

$\frac{4}{3}$

④ Which of these has a numerator?

10th

$\frac{2}{3}$

9

⑤ Which of these has a denominator?

$5\frac{1}{2}$

2, 4, 6

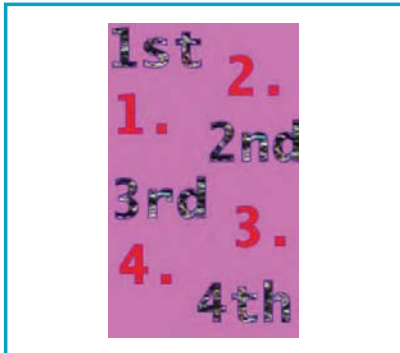
twelve



$$\frac{4}{2}$$

$$\frac{5}{16}$$

$$\frac{3}{4}$$





**ORDINAL**

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**CARDINAL**

---

**PROPER**

---

**NUMERATOR**

---

**DENOMINATOR**

---



