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.

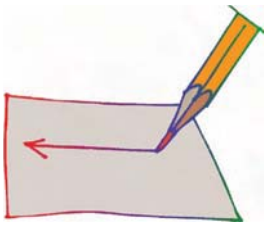
Half Time

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



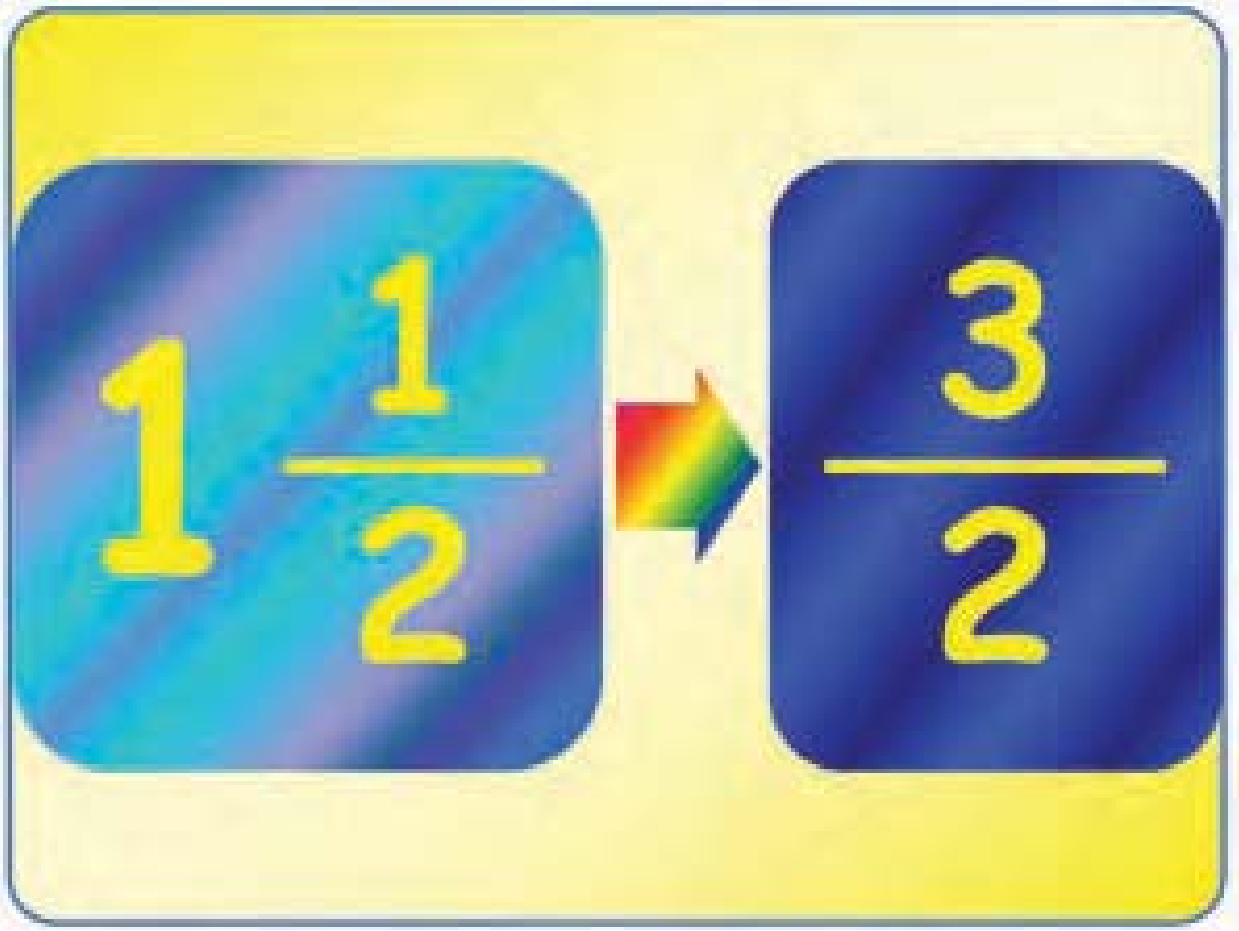
Numbered Illustrations

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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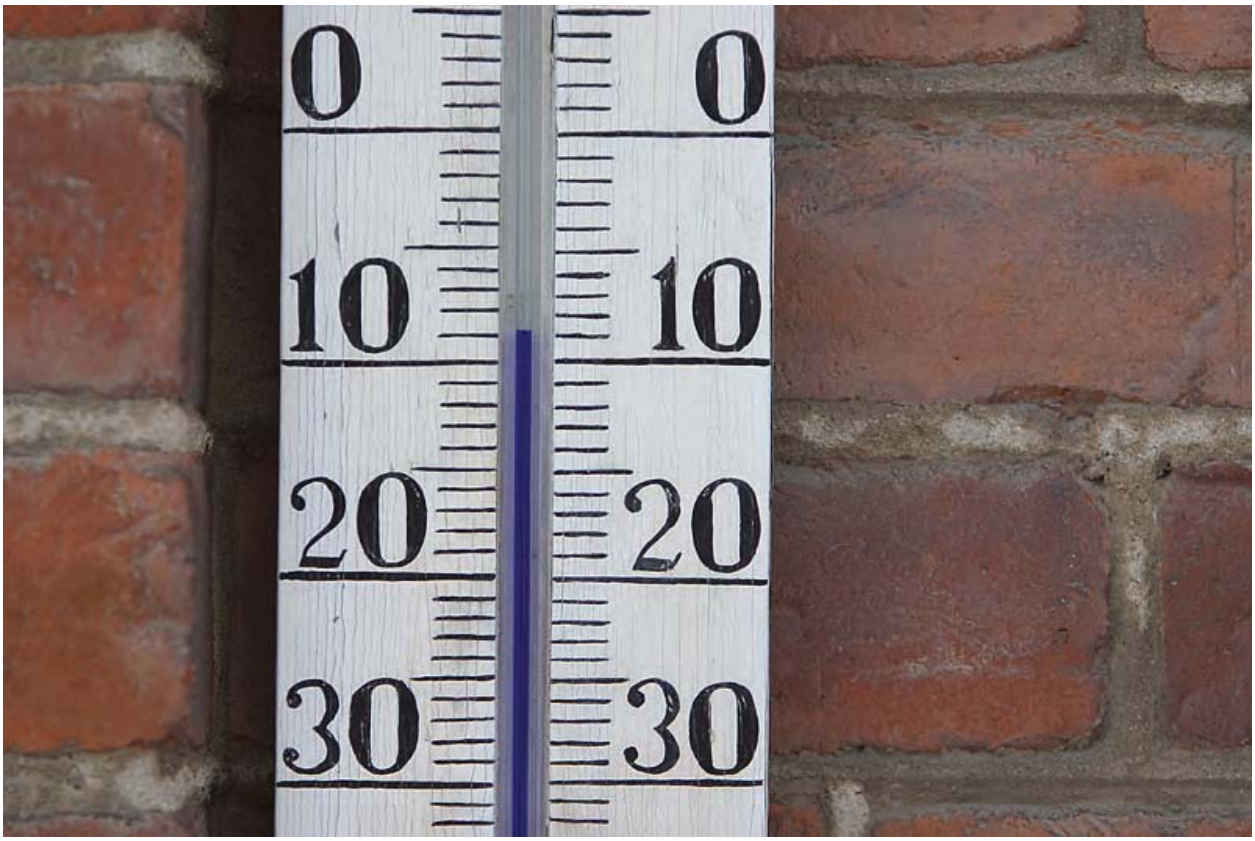
3/2

MIXED NUMBERS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20
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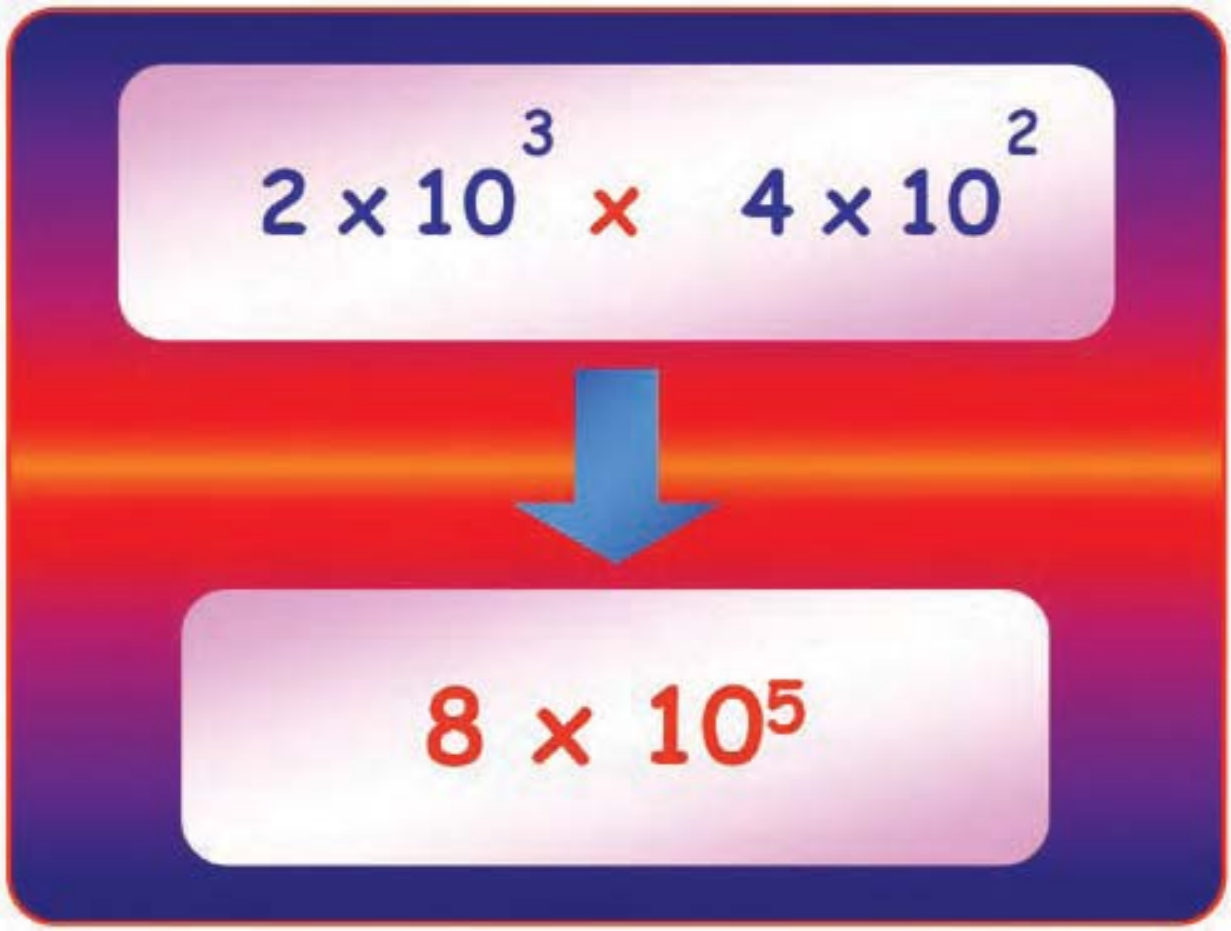
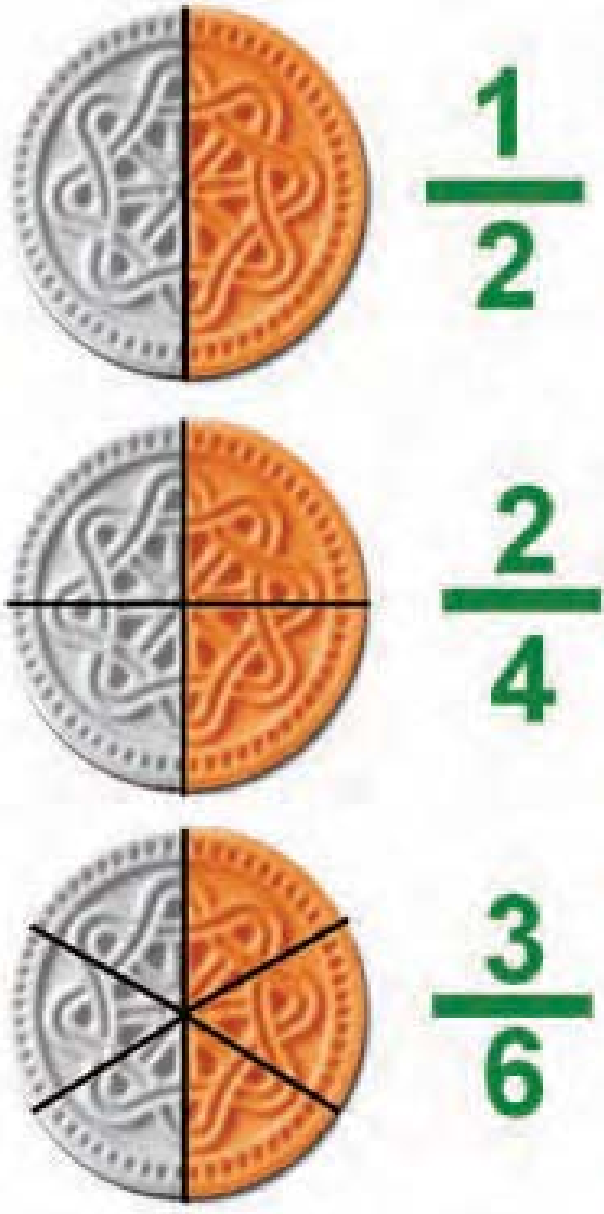
30
30

PROPERTIES


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

STANDARD FORM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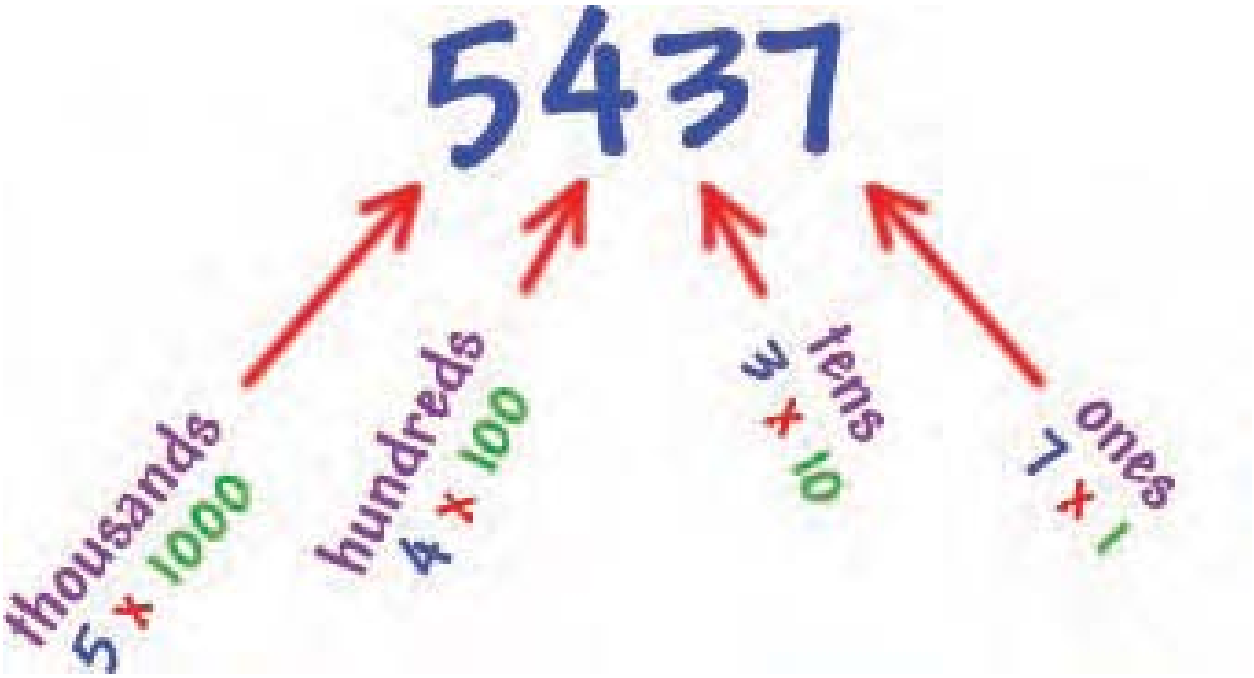
2
2
4
3
6

EQUIVALENT FRACTIONS


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

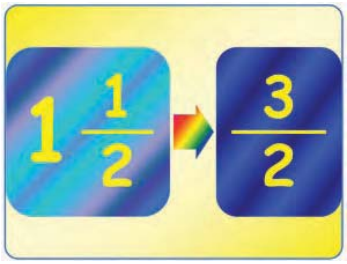
EXPANDED NOTATION

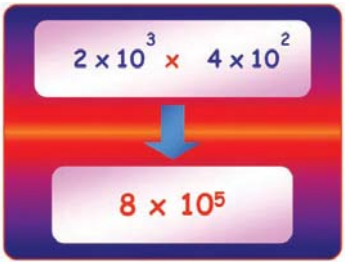
STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Numbered Pictures

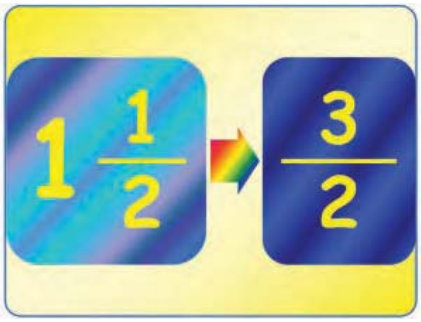
Say the key math words for this unit and associate each word with a number from one to five. The students must write the numbers of the words under their pictures.

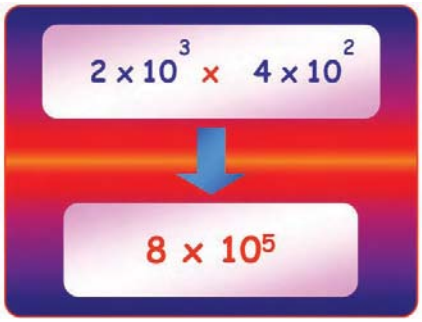


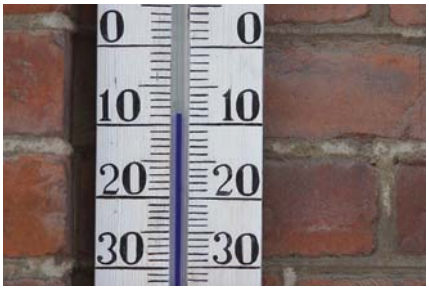


Mini Pictures

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

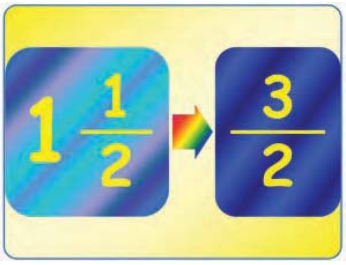
mixed numbers

equivalent fractions

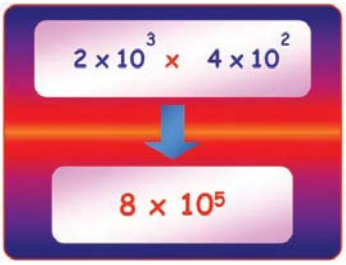
properties

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

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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.

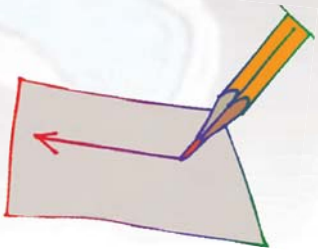
4. **Mixed/Proper** numbers have both whole numbers and fractions.

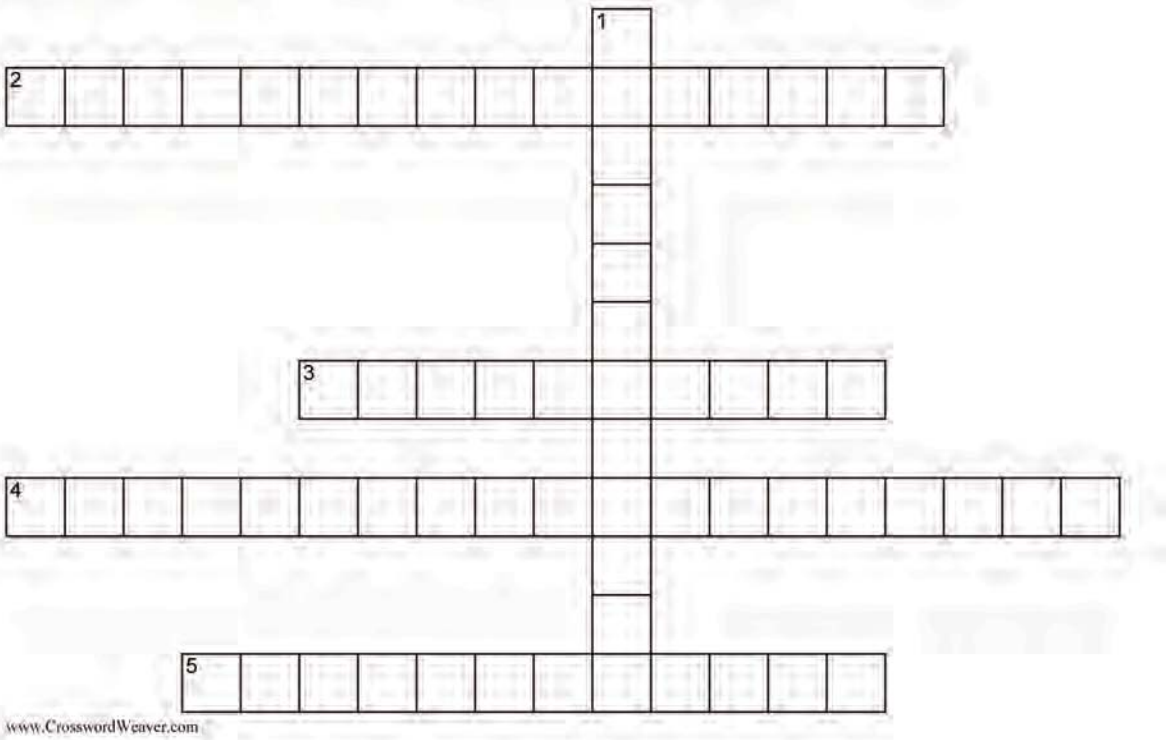
5. **Properties/Operations** are common features or characteristics.

STUDENT SUPPORT MATERIALS

Basic Writing

Crossword Puzzle





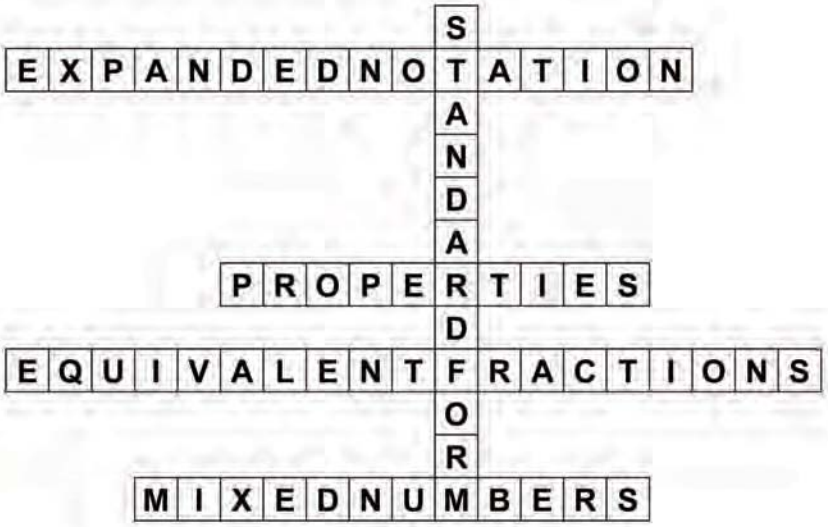
ACROSS

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

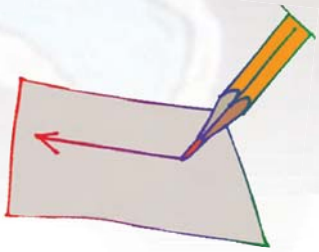
1 This is a way of writing down very large or very small numbers easily.

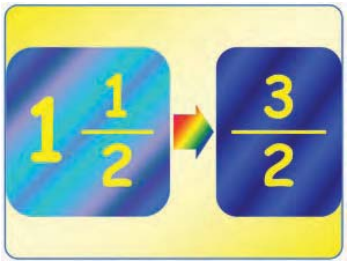
Crossword Puzzle Answers

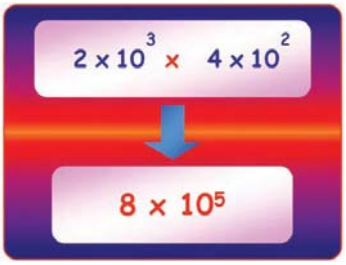


Basic Writing Activity Page

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.

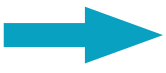
BASIC WRITING

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.

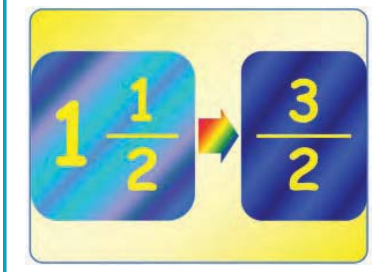


MATH PROGRAM

Unit Assessment Student Pages
Grade 6 • Unit 8

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

Number Correct:_____ **Percent Correct:_____**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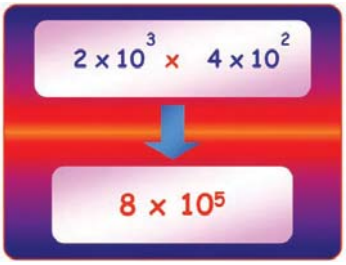
2 × 10^3 × 4 × 10^2
8 × 10^5


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2/4
3/6


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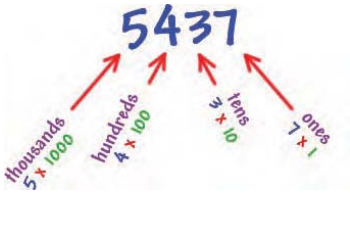
5437
thousands
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7 × 1

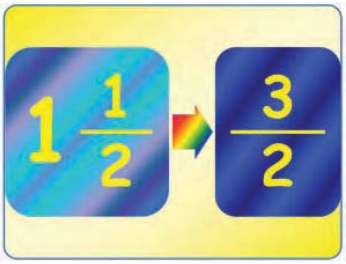
1. T F

2. T F

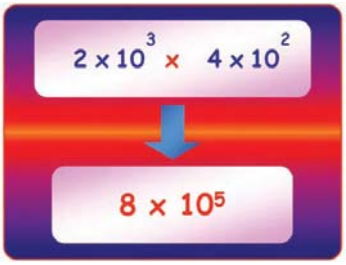
3. T F

4. T F

5. T F



expanded notation
standard form
equivalent fractions
mixed numbers
properties



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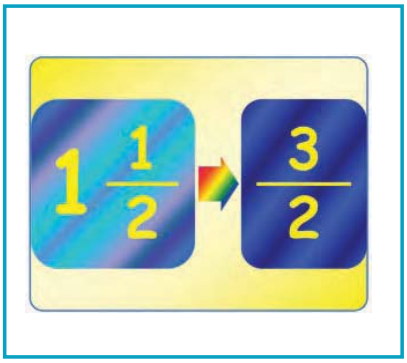
1. Which one of these show expanded notation?
   - ❍ 95%
   - ❍ 10-2/3
   - ❍ 100+10+4

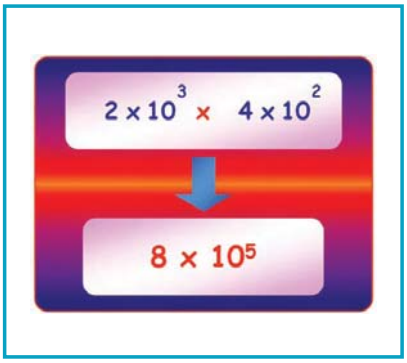
2. Which of these shows standard form?
   - ❍ 300+45+6
   - ❍ $2x10^3$
   - ❍ 1-1/2

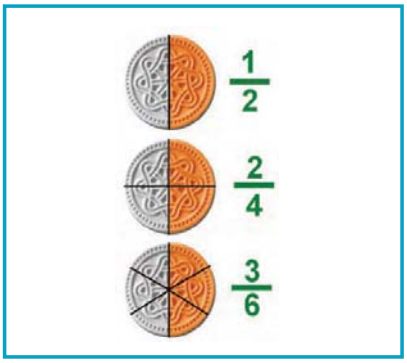
3. Which of these shows equivalent fractions?
   - ❍ 1/2 2/3
   - ❍ 3/4 1/5
   - ❍ 2/4 1/2

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
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thousands
5 x 1000
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7 x 1

EXPANDED NOTATION

STANDARD FORM

EQUIVALENT FRACTIONS

MIXED NUMBERS

PROPERTIES