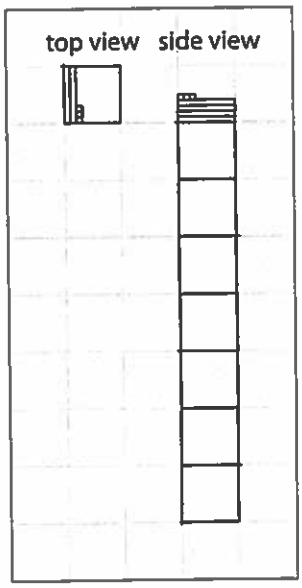
Name: _____ Date: _____

Scaffolding for Getting Started Page 1

STUDENT BOOK PAGES 38–39

Modelling and Comparing Numbers

Sam read that walking about 10 000 steps a day is healthy. Sam and 3 of her friends counted their steps one day. Sam showed the number of steps she walked with a base ten block tower and a sketch.



Healthy Walking

Name	Number of steps
Sam	7423
Stefan	8917
Mateo	6023
Lauren	7447

? How can you use models to show which student walked closest to 10 000 steps?

A. Write the number of steps Sam walked, in words.

_____

B. How does Sam's tower show that 7423 equals 7000 + 400 + 20 + 3?

- How many large cubes did Sam use? _____
- What does each large cube represent? _____
- How many hundreds blocks did Sam use? _____
- How many tens blocks did Sam use? _____
- How many ones blocks did Sam use? _____

C. How do you know that Sam walked about 7500 steps?

Place 7423 on the following number line to help you explain.

6000 6500 7000 7500 8000 8500 9000

_____

_____

Name: _____ Date: _____

2.2 Using Expanded Form Page 2

Step 4: Write the 3 possible distances.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones
3	4			0	0
3	4			0	0
3	8			0	0

Step 5: 344 800, 348 400, and 384 400 are possible distances.
Find out which is greater. Write each number in **expanded form.**

expanded form
A way to write a number that shows the value of each digit

344 800 = 3 hundred thousands + 4 ten thousands + 4 thousands + 8 hundreds
= 300 000 + 40 000 + 4000 + 800

348 400 = 3 hundred thousands + ___ ten thousands + ___ thousands + ___ hundreds
= 300 000 + _____ + _____ + _____

384 400 = 3 hundred thousands + ___ ten thousands + ___ thousands + ___ hundreds
= _____ + _____ + _____ + _____

The number of hundred thousands (3) is the same in each number.
Compare the ten thousands. (Circle) the number that has the most ten thousands.
344 800 348 400 384 400
So, _____ is the greatest number.
The distance between Earth and the Moon is _____ km.

Reflecting

384 400 is a 6-digit number. Why does the expanded form of 384 400 only have 4 values added together?

_____

_____

C&P Name: _____ Date: _____

2.2 Using Expanded Form Page 1

Student Book pages 44–47

Checking

You will need

- a place value chart
- counters

1. a) It takes the planet Jupiter **one hundred three thousand nine hundred forty-four** hours to travel around the Sun.
Show this number on the place value chart below.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones

Write the number in standard form. ___ ___ ___

It takes Saturn **200 000 + 50 000 + 8000 + 100 + 40 + 4** hours to travel around the Sun.
Show this number on the place value chart below.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones

Write the number in standard form. _____

b) Does Jupiter or Saturn take longer to go around the Sun? _____
How do you know?

_____

_____

C&P Name: _____ Date: _____

2.2 Using Expanded Form Page 2

Practising

2. Use 8 counters to model 3 different 6-digit numbers.

Draw your models in the place value charts below.

Model a 6-digit number.

Write it in standard form.

_____

Write it in expanded form.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones

_____ + _____ + _____ + _____ + _____ + _____

Model another 6-digit number.

Write it in standard form.

_____

Write it in expanded form.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones

_____

Model another 6-digit number.

Write it in standard form.

_____

Write it in expanded form.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones

_____

Chapter 2

Lesson 2

Using Expanded Form

GOAL

Represent, describe, and compare numbers to one million.

1. Write the number 863 291 in expanded form.

___ hundred thousands + ___ ten thousands + ___ thousands + ___ hundreds + ___ tens + ___ one

2. Write the number 582 100 in expanded form using numerals.

582 100 _____

At-Home Help

Expanded form is a way to write a number that shows the value of each digit. For example, the expanded form of 193 245 is:
1 hundred thousand
+ 9 ten thousands
+ 3 thousands + 2 hundreds
+ 4 tens + 5 ones, OR
100 000 + 90 000 + 3000 + 200 + 40 + 5.

3. Write each number in standard form.

a) 1 hundred thousand + 2 ten thousands + 5 thousands + 7 hundreds + 8 tens + 2 ones _____

b) 50 000 + 3000 + 200 + 60 + 9 _____

c) 500 000 + 30 000 + 5000 + 100 + 90 + 2 _____

d) 700 000 + 10 000 + 800 + 40 + 3 _____

4. Write the numbers in Question 3 in order from greatest to least.

_____

5. Draw seven counters on the place value chart to make a six-digit number. Write the standard form and the expanded form of your number.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones

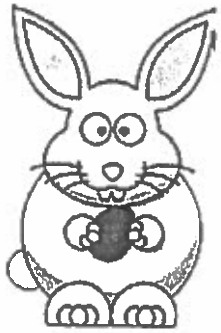
Standard form: _____

Expanded form: _____

Expanded Notation

Name: _____ Class: _____

Fill in the blanks



5,987 = ____ + ___ + ___ + 7

____ = 2,000 + 300 + 30

6,764 = ____ + 700 + 60 + ___

9,235 = ____ + 200 + ___ + 5

5,001 = ____ + 1

5,009 = 5,000 + ___ + ___ + 9

4,771 = ____ + ___ + ___ + 1

2,298 = ____ + ___ + ___ + 8

4,987 = ____ + ___ + ___ + ___

8,444 = ____ + ___ + ___ + ___

3,985 = 3,000 + ___ + ___ + 5

____ = 1,000 + 700 + 50

7,544 = ____ + ___ + ___ + 4

8,897 = ____ + 800 + ___ + 7

____ = 4,000 + 500 + 60 + 7

4,887 = ____ + ___ + ___ + ___

____ = 2,000 + 100 + 90 + 8

3,000 = 3,000 + ___ + ___ + ___

____ = 4,000 + 900 + 80 + 7

____ = 8,000 + 800 + 80 + 8

3,911 = ____ + ___ + ___ + 1

3,929 = ____ + ___ + ___ + ___

E-A Name: _____ Date: _____

2.3 Renaming Numbers

Student Book page 48

A group of students broke a world record by filling a container with 221 947 L of popcorn.

U 100 000 L | V 10 000 L | W 1000 L | X 100 L | Y 10 L | Z 1 L

Which of these containers could you use to measure 221 947 L?

Write 221 947 in expanded form.

_____

Use the expanded form to show one way you could measure 221 947 L.

2 × 100 000 L + ___ × 10 000 L + ___ × 1000 L + ___ × 100 L + ___ × 10 L + ___ × 1 L

Or, you could fill the 1 L container _____ times to measure 221 947 L.

Look at the two groups of 3 digits in 221 947.

221 947 = 221 thousands + _____ ones

You could fill the 1000 L container _____ times and the 1 L container _____ times.

Describe other ways you could use the containers to measure 221 497 L.

Idea: Represent 221 947 using counters on a place value chart. Then, regroup tens as ones, or hundreds as thousands, and so on, to find new combinations.

_____

_____

_____

E-B Name: _____ Date: _____

2.3 Renaming Numbers

Student Book page 48

GOAL

Rename numbers that have up to five digits.

You will need

- a place value chart
- counters

A litre (L) is a unit used to measure capacity.

Capacity is the amount that a container can hold.

A group of students broke a school record by filling a container with 21 947 L of popcorn.

Which containers could you fill if you had 21 947 L of popcorn?

A. Decide how many of each container you need to make 21 947 L.

Fill in the number of each container in the place value chart below.

Measuring 21 947 L

20 000 (ten thousands)	+ _____ (one thousands)	+ _____ (hundreds)	+ _____ (tens)	+ _____ (ones)
 V 10 000 L	 W 1000 L	 X 100 L	 Y 10 L	Z 1 L
2 × 10 000 L	___ × 1000 L	___ × 100 L	___ × 10 L	___ × 1 L

B. Here is another way to measure 21 947 L.

21 947 is 21 thousands and 947 ones. You could fill the 1000 L container _____ times and the 1 L container _____ times.

Name: _____ Date: _____

Chapter 2

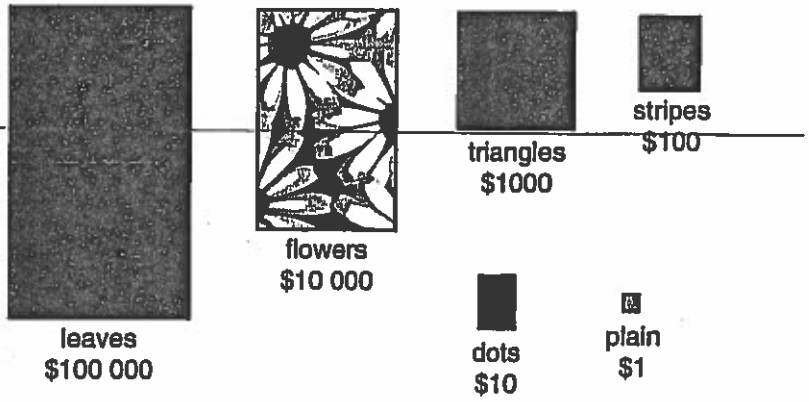
Lesson 3

Renaming Numbers

GOAL

Rename numbers that have up to seven digits.

1. Mateo, Jolie, and Tyler are playing a game. Each student has play money. They can use the money to buy decorated tiles.
Mateo has $387 622.
Jolie has $186 200.
Tyler has $420 331.



a) Which student has the most play money? _____

b) How many leaf tiles can Mateo buy? _____

c) Jolie says that she can buy 18 flower tiles.
Is she correct? Explain.

_____

d) Tyler says, "I can buy 42 flower tiles and 331 plain tiles."
Write two other sets of tiles that Tyler can buy with his money.

_____

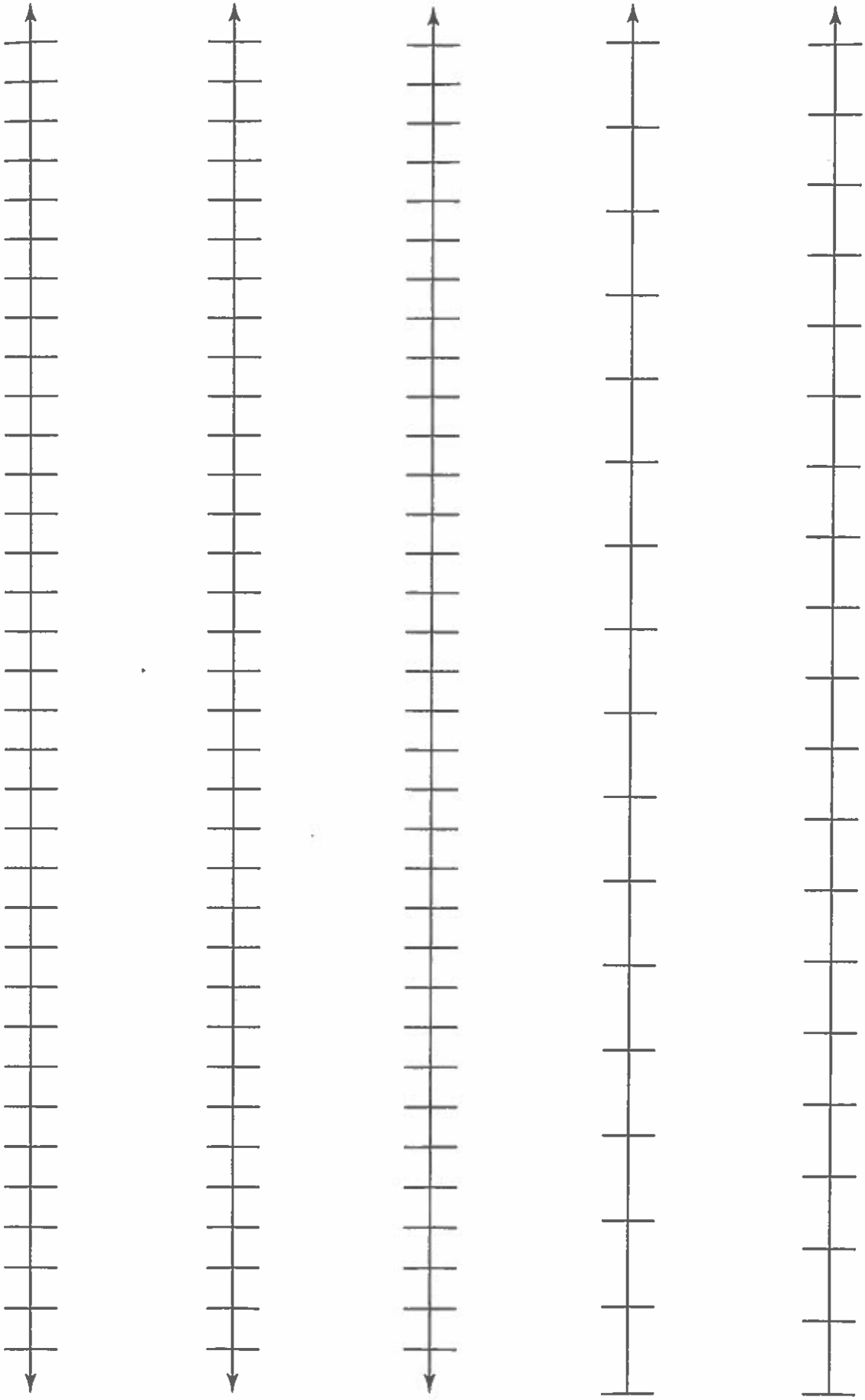
_____

e) Write three different sets of tiles that Mateo can buy.

_____

_____

_____



Name: _____ Date: _____

2.4 Rounding Numbers Page 1

Student Book pages 50–52

GOAL

Round numbers to the nearest thousand, the nearest hundred, and the nearest ten.

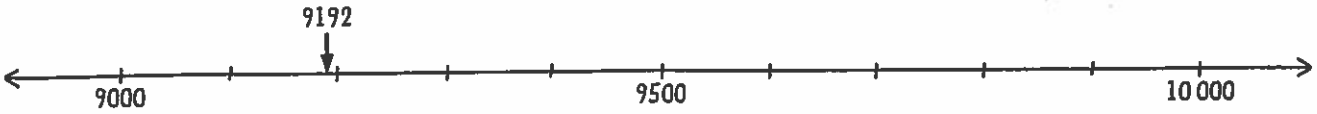
The population of an area is the total number of people who live there.

The Inuvik Region in the Northwest Territories had a population of 9192 in 2006.

What other ways can you use to show the population of the Inuvik Region?

A. The population of an area is always changing.

You could use an estimate to show the population of the Inuvik Region.



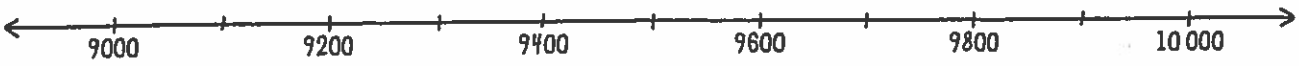
You could round 9192 to the nearest thousand.

How do you know that 9000 is the nearest thousand?

_____

B. Round the population of the Inuvik Region to the nearest hundred.

Hint: Is 9192 closest to 9100, 9200, 9300, . . . ?



The population of the Inuvik Region is _____.

C. Round the population of the Inuvik Region to the nearest ten.

The population of the Inuvik Region is _____.

L Name: _____ Date: _____

2.4 Rounding Numbers Page 2

Reflecting

You rounded 9192 to the nearest thousand.

Was the number rounded up or down? _____ Why?

_____

_____

You rounded 9192 to the nearest hundred.

Was the number rounded up or down? _____ Why?

_____

_____

You rounded 9192 to the nearest ten.

Was the number rounded up or down? _____ Why?

_____

_____

Which rounded number would you use to describe the population of the Inuvik Region?

_____ Why?

_____

_____

_____

If the population of the Inuvik Region increased by 900, what number would you round the population to? _____

C&P Name: _____ Date: _____

2.4 Rounding Numbers Page 1

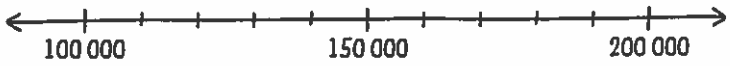
Student Book pages 50–52

Checking

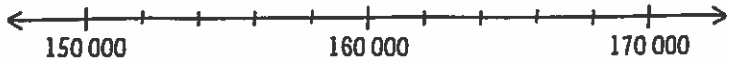
1. a) Round the populations of Kelowna and Abbotsford to the nearest hundred thousand, the nearest ten thousand, and the nearest thousand. Use number lines. Record your estimates in the table below.

City	Population in 2006	Nearest 100 000	Nearest 10 000	Nearest 1000
Kelowna	162 276			
Abbotsford	159 020			

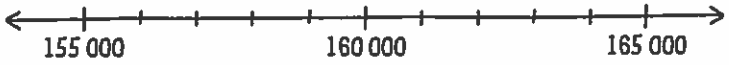
Use this number line to round the populations to the nearest hundred thousand.



Use this number line to round the populations to the nearest ten thousand.



Use this number line to round the populations to the nearest thousand.



b) Do the 2 populations round to the same hundred thousand? _____

Do the 2 populations round to the same ten thousand? _____

Do the 2 populations round to the same thousand? _____

C&P Name: _____ Date: _____

2.4 Rounding Numbers Page 2

Practising

3. Vasco looked up the total land and fresh water area of each Western province.

a) Round each area to the nearest hundred thousand, ten thousand, and thousand. Use the number lines on this page to help you estimate.

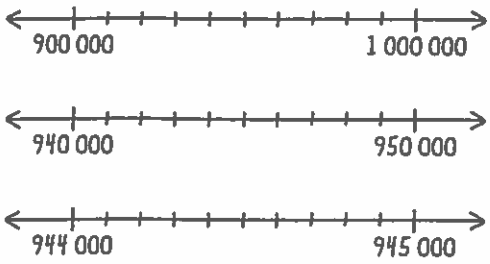
Province	Land and fresh water (km^2)	Nearest 100 000	Nearest 10 000	Nearest 1000
British Columbia	944 735			
Alberta	661 848			
Saskatchewan	651 036			
Manitoba	647 797			

b) Which provinces have the same area, to the nearest hundred thousand?

_____

_____

_____

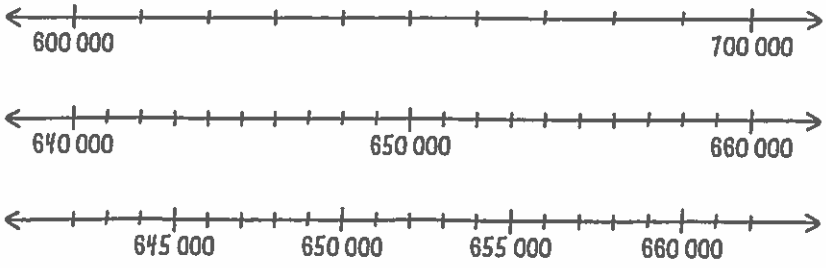


c) Which provinces have the same area, to the nearest ten thousand?

_____

_____

_____



Name: _____ Date: _____

Chapter 2 Lesson 4

Rounding Numbers

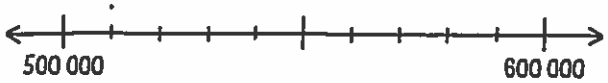
GOAL

Round numbers to the nearest hundred thousand, the nearest ten thousand, and the nearest thousand.

1. Mark each number on the number line. Then round each number to the nearest hundred thousand.

a) 215 000 _____

b) 557 000 _____



At-Home Help

You can round 486 186 in different ways:

- to the nearest hundred thousand: 500 000
- to the nearest ten thousand: 490 000
- to the nearest thousand: 486 000

2. Is 863 371 closer to 800 000 or 900 000? How do you know?

_____

_____

3. Round each number to the nearest ten thousand.

a) 741 938 _____ **c)** 578 000 _____

b) 116 220 _____ **d)** 386 442 _____

4. Round each number to the nearest thousand.

a) 561 372 _____ **c)** 983 871 _____

b) 110 283 _____ **d)** 453 666 _____

5. Round 736 927 to the nearest hundred thousand, ten thousand, and thousand.

_____

4. Round to the nearest hundred.

a) 385- _____
b) 847- _____
c) 602- _____
d) 769- _____
e) 7 754- _____
f) 999- _____
g) 867 635- _____
h) 64 687- _____
i) 387 524- _____

5. Round to the nearest thousand.

a) 4875- _____
b) 7463- _____
c) 57 635- _____
d) 736 057- _____
e) 305 736- _____
f) 746 857- _____
g) 730 263- _____
h) 630 784- _____
i) 1 857 937 _____

6. Round to the nearest ten thousand.

a) 384 746- _____
b) 3 756 938- _____
c) 384 968- _____
d) 765 374- _____
e) 384 056 - _____

E-A Name: _____ Date: _____

2.5 Exploring One Million

Student Book page 53

If you wrote a book about 1 million, what interesting facts would you include?

You will need

- a calculator

A humpback whale has a mass of 40 000 kg.

40 000 × 25 = _____

_____ humpback whales have a mass of 1 million kg.

A Pacific walrus has a mass of 4000 kg.

_____ Pacific walruses have a mass of 1 million kg.

A bottlenosed dolphin has a mass of 400 kg.

_____ bottlenosed dolphins have a mass of 1 million kg.

Research another animal mass.

Use the mass to write an interesting fact about 1 million.

_____

_____

The distance between Vancouver and Winnipeg is about 2000 km.

Divide 1 million km by the distance. Use a calculator.

1 000 000 km ÷ _____ km = _____

You would need to travel between Vancouver and Winnipeg _____ times to travel 1 million km.

Research the distance between 2 other cities in Canada.

Use the distance to write an interesting fact about 1 million.

_____

_____

E-B Name: _____ Date: _____

2.5 Exploring One Million

Student Book page 53

GOAL

Describe one million in various ways.

You will need

- a calculator

If you wrote a book about 1 million, what interesting facts would you include?

The mass of a blue whale is about 100 000 kg.

What number can you multiply 100 000 by to get 1 million?

100 000 × _____ = 1 000 000

So, _____ blue whales have a total mass of 1 million kg.

Cats sleep about 10 hours a day.

How many cats will it take to sleep 1 million hours in 1 day?

1 000 000 ÷ 10 = about _____ cats

It will take about _____ cats to sleep 1 million hours in 1 day.

The distance from Calgary to Vancouver is about 1000 km.

1 km = 1000 m

Write the distance from Calgary to Vancouver in metres.

1000 km × 1000 m = _____ m

Length of 1 bobcat = 1 m

Length of a row of 1 million bobcats = 1 000 000 × 1 m

= _____ m

A row of 1 million bobcats would stretch from Calgary to _____.

Millions

Name _____

The place value chart shows the number 378 206 542.

Millions			Thousands					
H	T	O	H	T	O	H	T	O
3	7	8	2	0	6	5	4	2

To read 378 206 542,
first read millions: 378 million,
then read thousands: 206 thousand,
then read the last 3 digits: 542.
378 million 206 thousand 542

The value of 3 in 378 206 542 is 300 000 000.

What place is underlined? Circle the answer.

1.

Millions			Thousands					
H	T	O	H	T	O	H	T	O
2	3	8	3	7	6	2	9	5

millions thousands

2.

Millions			Thousands					
H	T	O	H	T	O	H	T	O
5	3	7	6	9	7	4	2	0

ten millions ten thousands

3. 688 532 194 hundred millions hundred thousands

4. 924 336 172 hundred millions hundred thousands

What is the value of the underlined digit? Circle the answers.

	We say:	We write:
5. 234 566 918	3 million	3 000 000
	3 ten million	30 000 000
	3 hundred million	300 000 000
6. 212 784 966	7 thousand	7 000
	7 ten thousand	70 000
	7 hundred thousand	700 000

What is the value of the underlined digit?

7. 977 536 820 _____

8. 824 399 752 _____

9. 114 673 982 _____

10. 733 574 021 _____

Name: _____ Date: _____

Chapter 2 Lesson 5

Exploring One Million

GOAL

Describe one million in various ways.

Tyler collects pennies. He wants to know how many pennies he needs to collect to have $10, $100, $1000, and $10 000.

1. How many pennies are in $1?

   _____ pennies in $1

2. How many pennies are in $10?

   _____ hundreds = _____ pennies in $10

3. How many pennies are in $100?

   _____ hundreds = _____ pennies in $100

4. How many pennies are in $1000?

   _____ hundreds = _____ pennies in $1000

5. What pattern do you notice in your answers?

   _____

6. How many pennies are in $10 000?

   _____ pennies in $10 000

7. It takes Tyler 1 month to collect 100 pennies.

   How many months would it take him to collect $1? _____

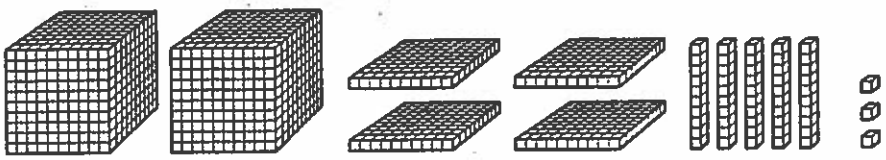
   How many months would it take him to collect $10 000 worth of pennies? Explain your thinking.

   _____

Numbers to 9999

Name _____

Write the number shown in this diagram 3 different ways.



Think: 2 thousands 4 hundreds 5 tens 3 ones

Write in words: two thousand four hundred fifty-three

Write the number: 2453

Write in expanded form: 2000 + 400 + 50 + 3

Write in words.

1. 3458 _____
2. 6205 _____
3. 8286 _____
4. 1018 _____

Write in numerals.

5. four thousand eighty-two _____
6. nine hundred fifty-four _____
7. six hundred forty-nine _____
8. one thousand five hundred one _____
9. seven thousand eight hundred twenty-nine _____

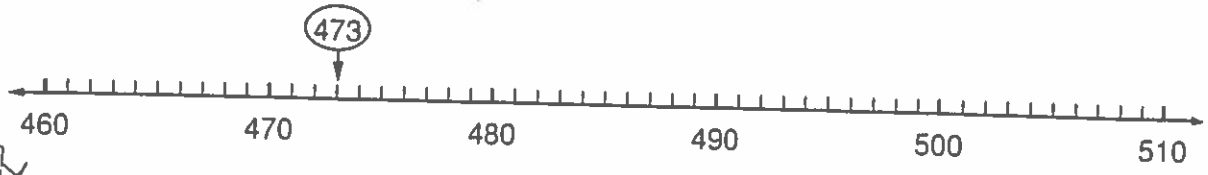
Write in expanded form.

10. 2134 _____
11. 1977 _____
12. 5806 _____
13. 7300 _____

Rounding Numbers

Name _____

Round 473 to the nearest 10.



Think: the closest multiples of 10 are 470 and 480.

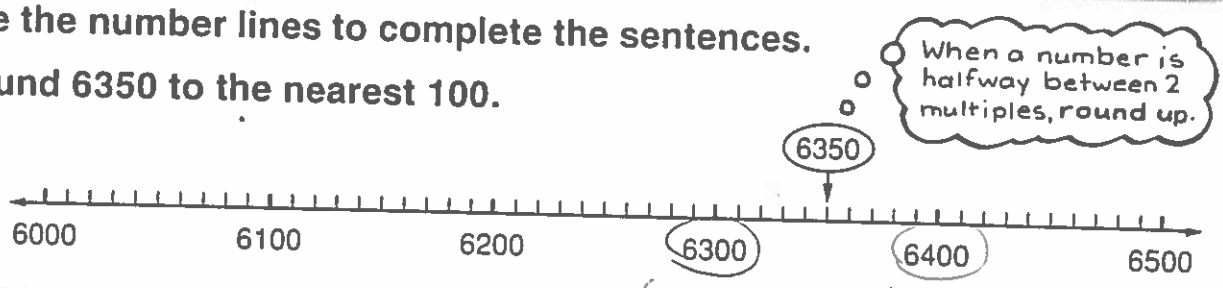
473 is closer to 470.

473 rounded to the nearest 10 is 470.

Use the number lines to complete the sentences.

Round 6350 to the nearest 100.

1.



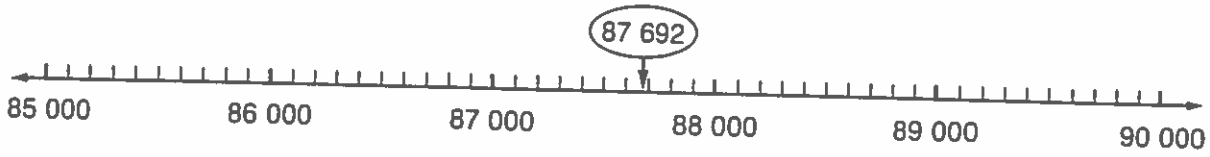
Think: the closest multiples of 100 are 6300 and 6400.

6350 is halfway between _____ and _____.

6350 rounded to the nearest 100 is _____.

Round 87 692 to the nearest 1000.

2.



Think: the closest multiples of 1000 are _____ and _____.

87 692 is closer to _____.

87 692 rounded to the nearest 1000 is _____.

Round the numbers. Use the number lines above if you wish.

3. 497 to the nearest 10 _____

4. 6420 to the nearest 100 _____

5. 6180 to the nearest 100 _____

6. 89 500 to the nearest 1000 _____

L Name: _____ Date: _____

2.6 Decimal Place Value Page 1

Student Book pages 56–59

GOAL

Read, write, and model decimals.

You will need

- base ten blocks
- a decimal place value chart

Mateo bought a package of trail mix to take on a hike.

The mass of the trail mix is 1.393 kg.

How can Mateo model the mass of the trail mix?

You can write fractions as decimals.

Fraction		Decimal
1 tenth	$\frac{1}{10}$	0.1
1 hundredth	$\frac{1}{100}$	0.01
1 thousandth	$\frac{1}{1000}$	0.001

Complete the chart.

Fraction		Decimal
3 tenths	$\frac{\square}{10}$	0.__
25 hundredths	$\frac{\square}{100}$	0.__ __
365 thousandths	$\frac{\square}{1000}$	0.__ __ __

You can write decimals in expanded form.

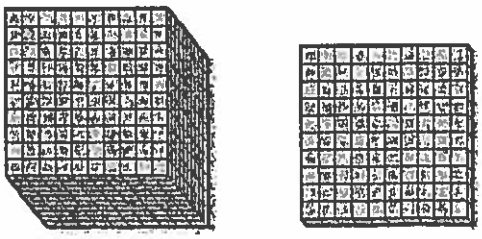
1.257 = 1 whole + 2 tenths + 5 hundredths + 7 thousandths

Write these decimals in expanded form.

1.834 = __ whole + __ tenths + __ hundredths + __ thousandths

2.696 = __ wholes + __ tenths + __ hundredths + __ thousandths

You can use base ten blocks to model fractions or decimals.



one
1 or 1.0

$\frac{1}{10}$ one tenth
$\frac{1}{10}$ or 0.__

$\frac{1}{100}$ one hundredth
$\frac{1}{100}$ or 0.__ __

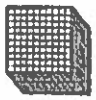
$\frac{1}{1000}$ one thousandth
$\frac{1}{1000}$ or 0.__ __ __

×10 ×10 ×10

L Name: _____ Date: _____

2.6 Decimal Place Value Page 2

Use base ten blocks to model 1.393 on a decimal place value chart.
Make a copy of this model.

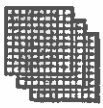
Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
		1 	3 	9 	3

Write 1.393 in expanded form.

1.393 = 1 whole + __ tenths + __ hundredths + __ thousandths

or $1 + \frac{\square}{10} + \frac{\square}{100} + \frac{\square}{1000}$

or ___ + 0.__ + 0.__ __ + 0.__ __ __

 +  + = 300 + 90 + 3 small cubes

= _____ thousandths

Write 1.393 in words.

one and _____ *thousandths*

Reflecting

In 1.393, the 3 in the 1st place after the decimal point represents _____.

The 3 in the 3rd place after the decimal point represents _____.

Which of these 3s represents a greater mass?

_____

C&P Name: _____ Date: _____

2.6 Decimal Place Value Page 1

Student Book pages 56–59

Checking

You will need

- base ten blocks

- a decimal place value chart

1. a) Rachel bought a 1.098 kg package of trail mix.

Model 1.098 kg using base ten blocks.

Hint: Leave the column empty when the place value is 0.

Sketch your model.

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

Write 1.098 in expanded form.

Hint: Do not include place values that are 0.

1.098 = 1 whole + __ hundredths + __ thousandths

or 1 + $\frac{\square}{100}$ + $\frac{\square}{1000}$

or 1 + 0.__ __ + 0.__ __ __

Write 1.098 kg in words.

one and _____ *thousandths of a kilogram*

b) Lauren bought a 1.401 kg package of trail mix.

Model 1.401 kg using base ten blocks.

Sketch your model.

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

C&P Name: _____ Date: _____

2.6 Decimal Place Value Page 2

Write 1.401 in expanded form.

1.401 = ___ whole + __ tenths + __ thousandth

or _____ + $\frac{\square}{\square}$ + $\frac{\square}{\square}$

or _____ + 0.__ + 0.__ __ __

Write 1.401 kg in words.

_____

Practising

2. A Canadian penny costs 0.008 cents to make.

a) Model 0.008 on a place value chart.

Hint: Leave the column empty when the place value is 0.

Sketch your model.

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

b) Write the cost in expanded form.

Hint: Only include place values that are not 0.

The expanded form of 0.008 is just _____ or $\frac{\square}{\square}$ or 0.__ __ __.

c) Write the cost in words.

_____

3. a) Write 6 + 0.5 + 0.02 + 0.006 in standard form. __. __ __ __

b) Write 1 + 0.2 + 0.005 in standard form. __. __ __ __

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

Name: _____ Date: _____

Chapter 2 Lesson 6

Decimal Place Value

GOAL

Read, write, and model decimals.

1. Write each number in standard form.
   - a) 1 + 0.3 + 0.02 + 0.007 _____
   - b) 6 + 0.4 + 0.009 _____
   - c) 0.5 + 0.03 + 0.005 _____

2. Write each number in expanded form using numerals.
   - a) 3.573 _____
   - b) 0.486 _____
   - c) 1.081 _____

3. Write each number in words. The first one is done for you.
   - a) 1.522 one and five hundred twenty-two thousandths
   - b) 4.112 _____
   - c) 0.703 _____
   - d) 0.008 _____

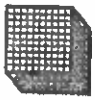
4. Owen modelled a decimal using base ten blocks on a place value chart. What is Owen's decimal?

_____

Thousands			Ones		
Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
					

At-Home Help

You can use base ten blocks to model decimal values.

 one block, or 1

 one tenth of a block, or 0.1

 one hundredth of a block, or 0.01

 one thousandth of a block, or 0.001

To read a number with a decimal, say "and" for the decimal part. Omit the "and" if there is no whole number part. For example:

- 1.382 is one and three hundred eighty-two thousandths.
- 0.047 is forty-seven thousandths.

L Name: _____ Date: _____

2.7 Renaming Decimals Page 1

Student Book pages 60–63

GOAL

Represent decimals and relate them to fractions.

You will need

- pencil crayons
- thousandths grids
- hundredths grids

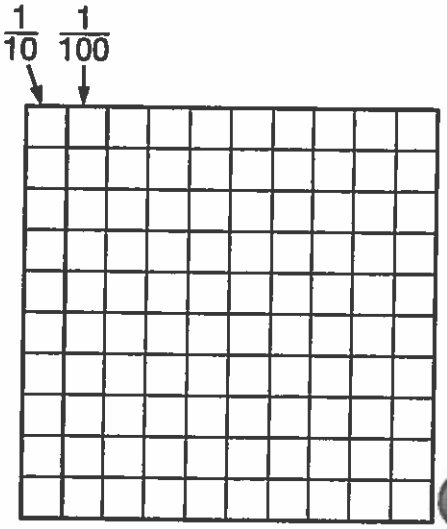
Anne goes to a school with 100 students.

Belle goes to a school with 1000 students.

There are 24 Grade 5 students in Anne's school.

There are 240 Grade 5 students in Belle's school.

How can you use decimals to compare the Grade 5 students in the 2 schools?



Step 1: Write a fraction for the number of Grade 5 students in Anne's school. $\frac{24}{100}$

Step 2: Model the fraction on a hundredths grid.

There are 10 columns in a hundredths grid.

Each column is one tenth or $\frac{1}{10}$ or 0.1.

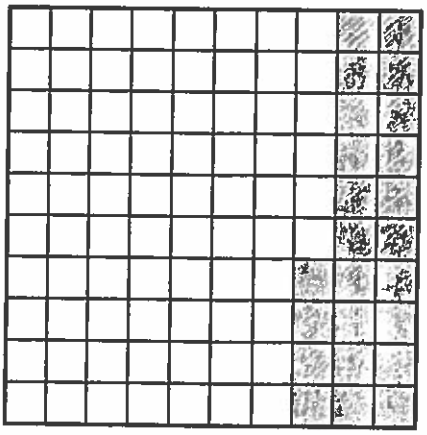
There are 100 squares in a hundredths grid.

Each square is one hundredth or $\frac{1}{100}$ or 0.01.

How many squares are in 1 column? _____

So, one tenth = _____ hundredths.

Colour 24 hundredths on the grid.



Step 3: Write the fraction $\frac{24}{100}$ as a decimal. 0._____

Step 4: Write the fraction $\frac{24}{100}$ in expanded form.

$\frac{24}{100}$ is the same as 24 hundredths.

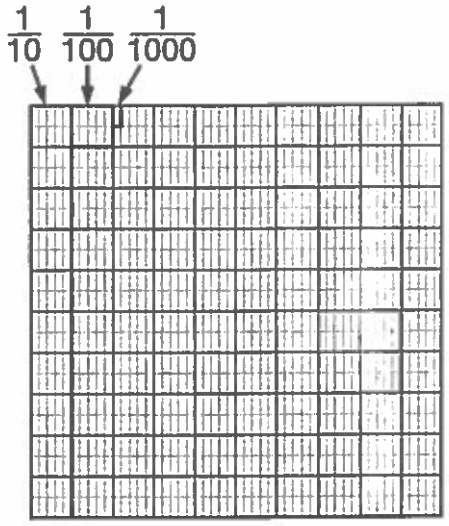
24 hundredths is _____ tenths + _____ hundredths.

L Name: _____ Date: _____

2.7 Renaming Decimals Page 2

Step 5: Write a fraction for the number of Grade 5 students in Belle's school. $\frac{\square}{\square}$

Step 6: Model the fraction on a thousandths grid.



There are 10 columns in a thousandths grid.

Each column is one tenth or $\frac{1}{10}$ or 0.1.

There are _____ squares in a thousandths grid.

Each square is one _____ or $\frac{\square}{\square}$ or 0._____.

How many squares are in a column? _____

So, 1 tenth = _____ hundredths.

There are 1000 rectangles in a thousandths grid.

Each rectangle is one thousandth or $\frac{1}{1000}$ or 0.001.

There are 100 rectangles in a column.

So, 1 tenth = _____ thousandths.

Colour 240 hundredths on the grid.

equivalent

Having the same value

For example,

$\frac{8}{10} = \frac{80}{100}$

Step 7: Write the fraction $\frac{240}{1000}$ as a decimal. 0._____

Step 8: Write the fraction $\frac{240}{1000}$ in expanded form.

$\frac{240}{1000}$ is the same as 240 thousandths.

240 thousands is _____ tenths + _____ hundredths + _____ thousandths

The amount that is coloured on both grids is the same.

The decimals 0.24 and 0.240 are **equivalent** decimals.

Reflecting

How did writing both decimals in expanded form show that they are equivalent?

_____

_____

C&P Name: _____ Date: _____

2.7 Renaming Decimals Page 1

Student Book pages 60–63

Checking

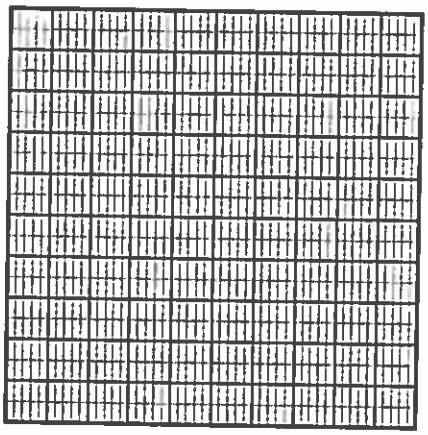
You will need

- pencil
- crayons
- thousandths grids

1. There are 1000 students at Belle's school.
400 students play an instrument.

a) Colour a thousandths grid to show 400 out of 1000 students.

Hint: Each column is 1 tenth. 1000 ÷ 10 = _____,
so each column is _____ thousandths.



b) Write a fraction to represent the coloured part of the grid. $\frac{\square}{1000}$
Write this fraction as a decimal. _____

Each square on the grid is 1 _____.
Count the number of squares you coloured.
Write another fraction to represent the coloured part of the grid. $\frac{\square}{100}$

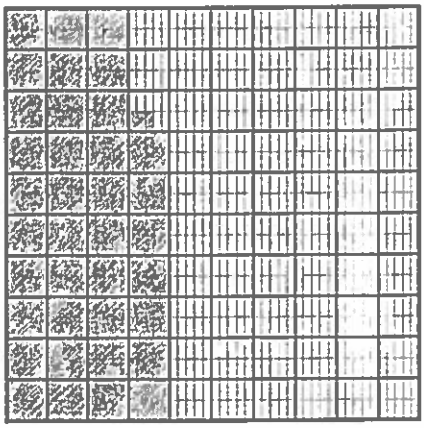
Each column on the grid is 1 _____.
Count the number of columns you coloured.
Write another fraction to represent the coloured part of the grid. $\frac{\square}{10}$
Write this fraction as a decimal. _____

C&P Name: _____ Date: _____

2.7 Renaming Decimals Page 2

Practising

2. Emanuel coloured part of a thousandths grid.



a) Write a fraction to represent the coloured part. $\frac{\square}{\square}$

b) Write a decimal thousandth to represent the coloured part. _____

5. a) 0.29

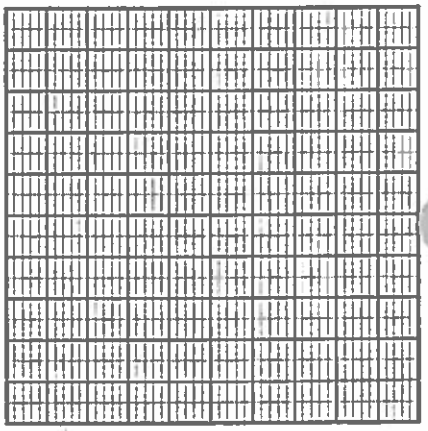
Write the decimal in expanded form.

_____ tenths + _____ hundredths

1 column is 1 tenth.

1 square is 1 _____.

Colour the decimal on the grid.

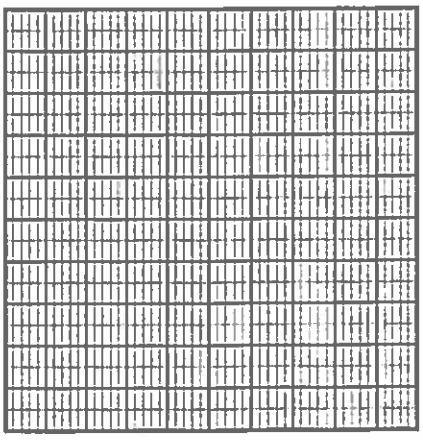


Write the decimal as an equivalent decimal thousandth.

0.29 = _____

b) 0.68

Colour the decimal on the grid.



Write the decimal as an equivalent decimal thousandth.

0.68 = _____

Name: _____ Date: _____

Chapter 2 Lesson 7

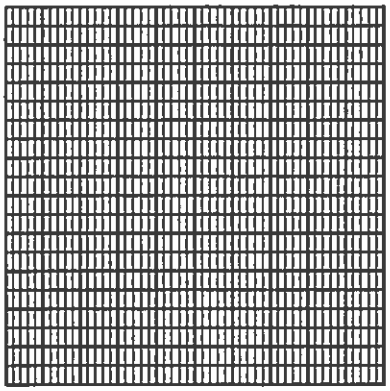
Renaming Decimals

GOAL

Represent decimals and relate them to fractions.

1. There are 1000 cans of drinks.
350 of the cans hold juice.

a) Colour the thousandths grid to represent the number of juice cans.



b) Complete these fractions to show the number of juice cans. $\frac{\quad}{100}$ or $\frac{\quad}{1000}$

c) Write the number of juice cans as a decimal hundredth. _____

d) Write the number of juice cans as a decimal thousandth. _____

At-Home Help

Equivalent means having the same value. For example:

- 0.4, 0.40, and 0.400 are equivalent decimals.
- $\frac{3}{10}$, $\frac{30}{100}$, and $\frac{300}{1000}$ are equivalent fractions.
- 0.08 is equivalent to 0.080, or $\frac{8}{100}$, or $\frac{80}{1000}$.

2. Write each decimal as a decimal hundredth and as a decimal thousandth.

a) 0.4 0.40 and _____

b) 0.1 _____ and _____

c) 0.9 _____ and _____

d) 0.7 _____ and _____

3. Write each fraction as a decimal thousandth and as a decimal hundredth.

a) $\frac{730}{1000}$ _____ and _____

b) $\frac{120}{1000}$ _____ and _____

c) $\frac{80}{1000}$ _____ and _____

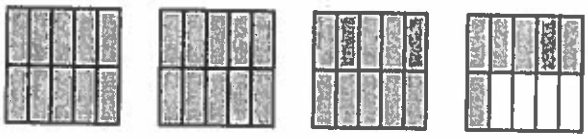
d) $\frac{10}{1000}$ _____ and _____

Ones and Tenths

Name _____

You can use a decimal number to show part of a whole.

Each square has 10 equal parts. Each part is 1 tenth of the whole square.



3 whole squares and 6 tenths of another square are shaded.

We think of place values.	We say in words.	We write as a decimal number.

Tens	Ones	Tenths
	3	6

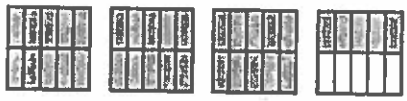
3 and 6 tenths

3.6

Write a decimal number to show how much is shaded.

1. 
2.3

2. 
_____

3. 
_____

Write each decimal number in the place value chart.

4. 5.2
6. 1.7

Tens	Ones	Tenths

5. 4.9
7. 15.5

Tens	Ones	Tenths

Write each decimal number:

8. 8 and 4 tenths _____
10. 22 and 7 tenths _____
12. 75 and 8 tenths _____
14. 16 and 2 tenths _____
16. 594 and 6 tenths _____
18. 415 and 7 tenths _____

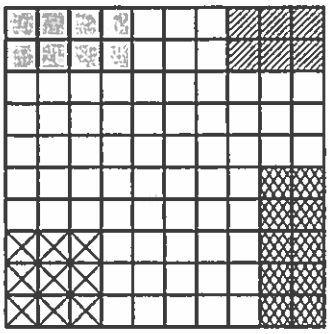
9. 5 and 3 tenths _____
11. 30 and 5 tenths _____
13. 52 and 1 tenth _____
15. 81 and 0 tenths _____
17. 284 and 9 tenths _____
19. 309 and 4 tenths _____

Hundredths

Name _____

There are 100 boxes in the whole square.
Each box is 1 hundredth of the whole square.

8 of the 100 boxes are shaded.



We think:

Ones	Tenths	Hundredths
0	0	8

We say in words: 8 hundredths

We write as a decimal number: 0.08

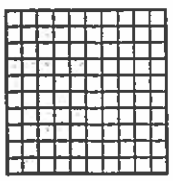
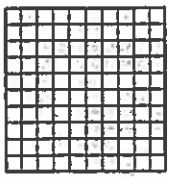
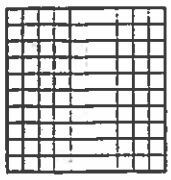
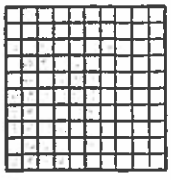
Look at the 100 boxes above. Complete.

	We see:	We think: Ones	Tenths	Hundredths	We say:	We write:
1.	6 ▨	0	0	6	6 hundredths	0.06
2.	___ ☒				___ hundredths	___ . ___ ___
3.	___ ▩				___ hundredths	___ . ___ ___

Write each decimal number.

4. sixty hundredths _____
5. sixteen hundredths _____
6. twenty-four hundredths _____
7. five hundredths _____

Write a decimal number to show how much is shaded.

8. 
9. 
10. 
11. 

_____ _____ _____ _____

Ones, Tenths, and Hundredths

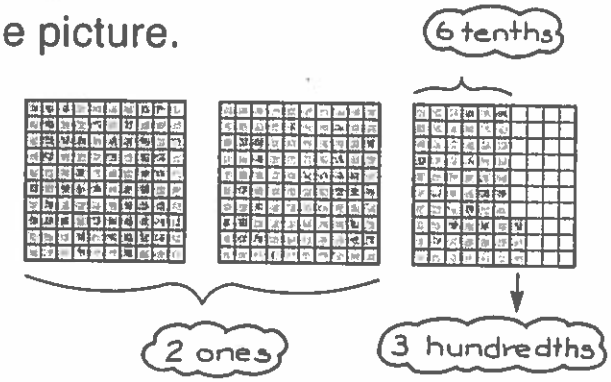
Name _____

Write the decimal number shown by the picture.

How many ones are shown? 2

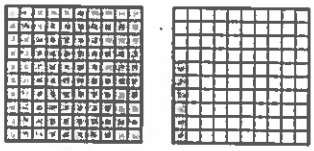
How many tenths are shown? 6

How many hundredths are shown? 3



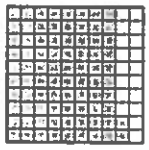
We think:			We say:	We write:
Ones	Tenths	Hundredths		
2	6	3	2 and 63 hundredths	2.63

Fill in the place value charts. Write the decimal number for each.

1. 

Ones	Tenths	Hundredths
1	0	6

Decimal Number 1.06

2. 

Ones	Tenths	Hundredths

Decimal Number _____

Write the value of each underlined digit.

3. 5.6̲3 — 6 tenths
4. 9.2̲9 — _____
5. 8̲.12 — _____
6. 4.4̲1 — _____
7. 7.8̲5 — _____
8. 6.5̲6 — _____
9. 3.3̲4 — _____
10. 3̲.77 — _____
11. 1.8̲5 — _____
12. 9.2̲5 — _____
13. 5.9̲1 — _____
14. 4.0̲8 — _____
15. 2̲.83 — _____
16. 4.5̲9 — _____

C&P Name: _____ Date: _____

2.8 Communicating about Equivalent Decimals Page 1

Student Book pages 64–65

Checking

Communication Checklist

- ✔ Did you use math language?
- ✔ Did you include the right amount of detail?
- ✔ Did you include a diagram?

1. Emily explained why 0.2 and 0.20 are equivalent.

I can model 0.2 and 0.20 on a place value chart.
They are equivalent.

Use the Communication Checklist to improve Emily's explanation.

☐ Did Emily use math language?

Underline the math language Emily used in her explanation.

☐ Did Emily include the right amount of detail?

Rewrite Emily's explanation using more detail.

I can model 0.2 and 0.20 on a place value chart.
0.2 is _____ tenths and 0.20 is _____ hundredths.
I can regroup 20 hundredths as 2 _____.
So, 0.2 and 0.20 are _____ decimals.

☐ Did Emily include a diagram?

Show 0.2 and 0.20 on the place value chart below.

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

C&P Name: _____ Date: _____

2.8 Communicating about Equivalent Decimals Page 2

Practising

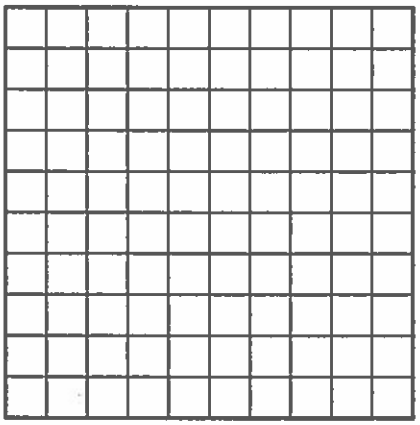
2. Jeremy and Anna are driving to Peace River with their parents.

Jeremy says that they have driven 0.3 of the way.

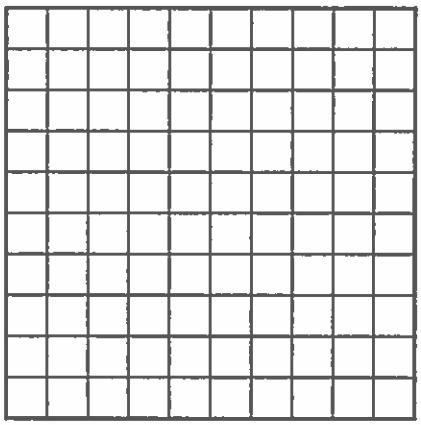
Anna says that they have driven $\frac{30}{100}$ of the way.

Explain why they are both right.

Represent 0.3 and $\frac{30}{100}$ on the hundredths grids.



0.3



$\frac{30}{100}$

Use your diagrams to help you explain why 0.3 and $\frac{30}{100}$ are equivalent.

Use the Communication Checklist.

_____

_____

_____

_____

Communication Checklist

- ✔ Did you use math language?
- ✔ Did you include the right amount of detail?
- ✔ Did you include a diagram?

L Name: _____ Date: _____

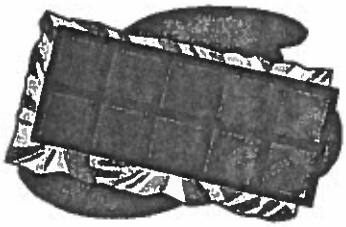
2.8 Communicating about Equivalent Decimals Page 1

Student Book pages 64–65

GOAL

Explain whether two decimals are equivalent.

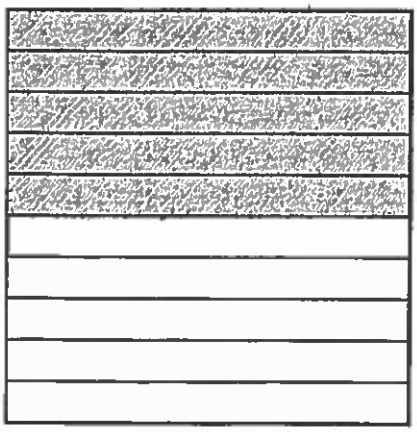
Stefan has a chocolate bar.
His brother, Colin, wants him to share it.
Stefan tells Colin that 0.5, 0.50, and 0.500 of the chocolate bar are the same amount.
Colin wants to know why.



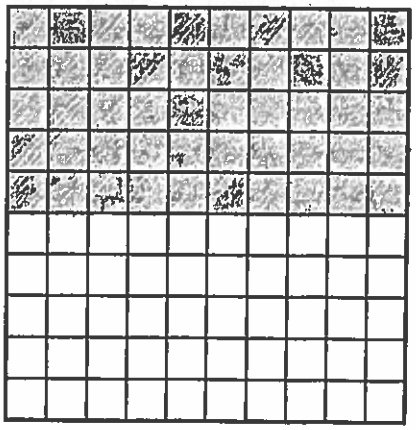
How can Stefan explain how he knows that the decimals are equivalent?

This is Stefan's explanation.
I'll use models to represent the chocolate bar, and I'll colour the decimals.

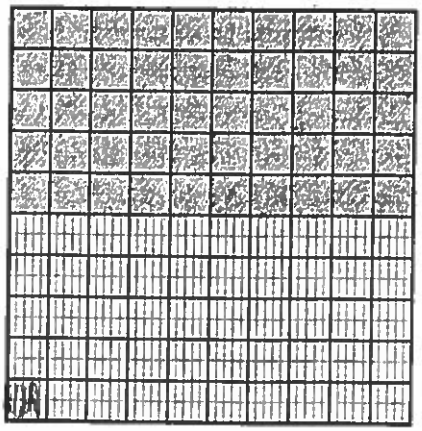
I can model 0.5 on a tenths grid.



I can model 0.50 on a hundredths grid.



I can model 0.500 on a thousandths grid.



The decimals 0.5, 0.50, and 0.500 are equivalent because the same amount is coloured on all 3 grids.

L Name: _____ Date: _____

2.8 Communicating about Equivalent Decimals Page 2

What did Stefan explain well? Use the Communication Checklist.

_____

_____

_____

_____

Communication Checklist

- ✔ Did you use math language?
- ✔ Did you include the right amount of detail?
- ✔ Did you include a diagram?

Improve Stefan's explanation.

Explain why Stefan modelled 0.5 on a tenths grid, 0.50 on a hundredths grid, and 0.500 on a thousandths grid.

_____

_____

Explain why Stefan could compare the coloured amounts on the 3 different grids.

Hint: How are the grids alike? How are they different?

_____

_____

_____

Reflecting

How did the diagrams help Stefan explain?

_____

_____

_____

_____

Chapter 2 Lesson 8

Name: _____ Date: _____

Communicating about Equivalent Decimals

GOAL

Explain whether two decimals are equivalent.

1. Explain how you know that 0.6 is equivalent to 0.60. Use the Communication Checklist.

_____

_____

_____

At-Home Help

Communication Checklist

- ✔ Did you use math language?
- ✔ Did you include the right amount of detail?
- ✔ Did you include a diagram?

2. Brandon lives 100 m away from the school. He says, "I walked 50 m. This means that I walked 0.05 of the distance." Do you agree with Brandon? Explain why or why not.

_____

_____

3. Jay's home is 100 m away from the school. He walked 0.6 of the distance. How many metres did he walk? How do you know?

_____

_____

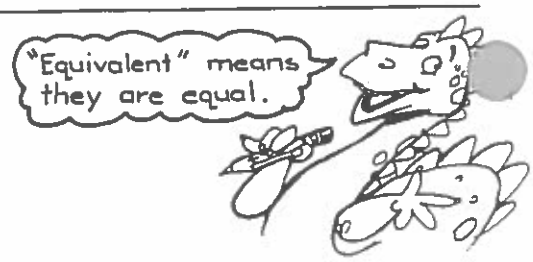
4. Rachel's home is 1000 m away from the school. She walked 0.8 of the distance. How many metres did she walk? How do you know?

_____

_____

Equivalent Decimals

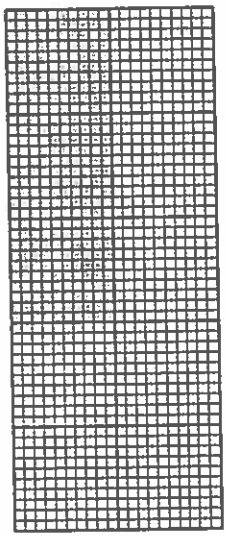
Name _____



Different decimals can have the same value. These are called equivalent decimals.

There are 10 boxes in the rectangle.
Each box is 1 tenth of the rectangle.
3 boxes are shaded.

0.3 of the rectangle is shaded.



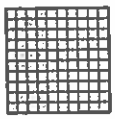
There are 1000 small squares in the rectangle.
Each small square is 1 thousandth of the rectangle.
300 small squares are shaded.

0.300 of the rectangle is shaded.

So 3 tenths and 300 thousandths are equivalent. 0.3 = 0.300

Write 2 decimal numbers for each picture.

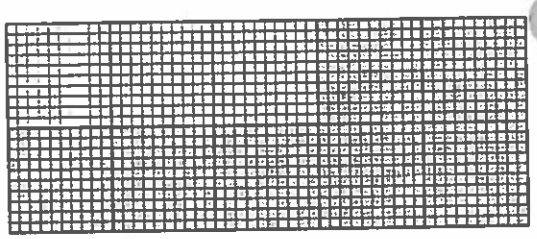
1.



4 tenths = 40 hundredths

0.4 = 0.40

2.



7 tenths _____ = _____ 700 thousandths

Write an equivalent decimal number.

3. 0.08 0.080
4. 0.1 _____
5. 0.200 _____
6. 0.6 _____
7. 0.06 _____
8. 0.370 _____
9. 0.57 _____
10. 0.400 _____
11. 0.16 _____
12. 0.12 _____
13. 0.010 _____
14. 0.5 _____

L Name: _____ Date: _____

2.9 Rounding Decimals Page 1

Student Book pages 66–68

GOAL

Interpret rounded decimals, and round decimals to the nearest tenth.

You will need

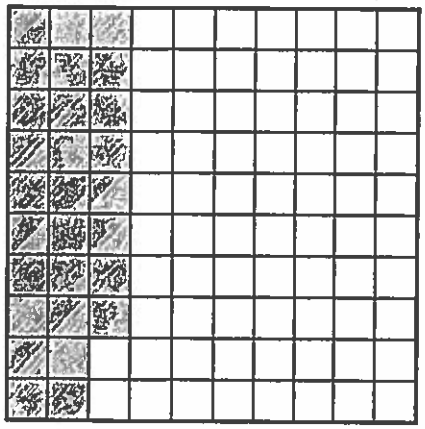
- pencil
- crayons
- hundredths grids

Rachel has a Little League batting average of 0.28.

This means she can expect to get 28 hits in 100 times at bat.

About how many hits would you expect Rachel to get in 10 times at bat?

Rachel modelled 0.28 on a hundredths grid.



A. Did Rachel colour more or less than 3 full columns? _____

Is the part Rachel coloured closer to 2 full columns or 3 full columns?

_____

3 columns are _____ tenths.

B. Round Rachel's batting average to the nearest tenth. 0.__

Rachel will probably get about _____ hits in 10 times at bat.

L Name: _____ Date: _____

2.9 Rounding Decimals Page 2

C. Rachel's batting average is 0.28.

This means that she can expect to get 28 hits in 100 times at bat.

How many hits would Rachel need to get a batting average of 0.30? _____

How many squares would need to be coloured in on a hundredths grid? _____

0.30 = _____ hundredths

Reflecting

Round 0.71 to the nearest tenth. _____

How many full columns would you colour in on a hundredths grid? _____

How many squares in the next column would be coloured in? _____

What does this tell you about rounding 0.71 to the nearest tenth?

_____

_____

_____

C&P Name: _____ Date: _____

2.9 Rounding Decimals Page 1

Student Book pages 66–68

Checking

You will need

- pencil
- crayons
- thousandths grids

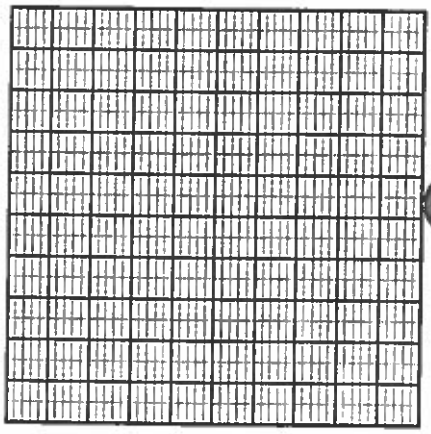
1. The chart on this page shows batting averages for 2 professional baseball players.

Batting averages are reported in decimal thousandths. A batting average of 0.447 means the player can expect to get 447 hits in 1000 times at bat.

Batting Averages

Player	Batting average
J. McDonald	0.447
R. Clayton	0.288

a) Model J. McDonald's batting average of 0.447 on the thousandths grid provided here.



b) Round 0.447 to the nearest hundredth.
0.447 is about _____

c) J. McDonald will probably get about _____ hits in 100 times at bat.

d) Round 0.447 to the nearest tenth.
0.447 is about _____

e) J. McDonald will probably get about _____ hits in 10 times at bat.

f) Round R. Clayton's batting average of 0.288 without using a grid.
Think of 288 as a whole number.
You can round 288 to 290. You can round 0.288 to 0.__ __.
You can round 288 to 300. You can round 0.288 to 0.__.

C&P Name: _____ Date: _____

2.9 Rounding Decimals Page 2

Practising

2. Round each decimal to the nearest hundredth and the nearest tenth.

(Circle) the nearest hundredth and nearest tenth for each decimal in the chart below.

	Decimal	Nearest hundredth		Nearest tenth	
a)	0.158	0.15	0.16	0.1	0.2
b)	0.228	0.22	0.23	0.2	0.3
c)	1.067	1.06	1.07	1.0	1.1
d)	2.039	2.03	2.04	2.0	2.1

3. Which numbers below round to the same hundredth?

0.234 0.324 0.237 0.229

Look at the digits in the tenths place in each number.

Could 0.324 round to the same hundredth as the other 3 numbers? _____

Explain why or why not.

_____

_____

Look at 0.234 and 0.237.

Would you round 0.234 to 0.23 or 0.24? _____

Would you round 0.237 to 0.23 or 0.24? _____

Do these 2 numbers round to the same hundredth? _____

Look at 0.229. Would you round 0.229 to 0.22 or 0.23? _____

Which of the other numbers rounds to the same hundredth? _____

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

Name: _____ Date: _____

Chapter 2 Lesson 9

Rounding Decimals

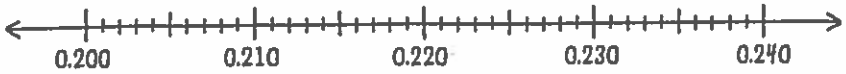
GOAL

Interpret rounded decimals, and round decimals to the nearest tenth or the nearest hundredth.

1. Round each decimal to the nearest hundredth. Use the number line to help you.

a) 0.239 _____ **c)** 0.224 _____

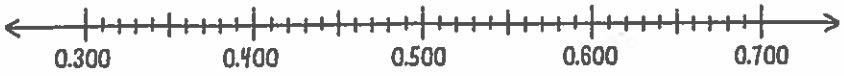
b) 0.213 _____ **d)** 0.207 _____



2. Round each decimal to the nearest tenth. Use the number line to help you.

a) 0.420 _____ **c)** 0.385 _____

b) 0.570 _____ **d)** 0.612 _____



At-Home Help

You can round decimals to the nearest hundredth or to the nearest tenth.

For example, round 0.574 to the nearest hundredth and tenth.

- nearest hundredth: 0.57
- nearest tenth: 0.6

3. Taylor surveyed 1000 students at her school. These are her results:

- 549 students have cats
- 304 students have dogs
- 118 students have fish

a) Out of 100 students, about how many have cats? about _____ students

b) Out of 100 students, about how many have dogs? about _____ students

c) Out of 100 students, about how many have fish? about _____ students

4. Circle the numbers that round to 2.78 if you are rounding to the nearest hundredth.

2.783 2.787 2.778 2.786 2.773 2.777

Student Activity

Name: _____

From Fractions to Decimals

Jamal made a fraction train.

$\frac{1}{10}$ of the train is grey. One tenth can also be written as 0.1 .

Name the shaded part of each fraction train as a decimal.

1. $\frac{5}{10}$  _____

2. $\frac{2}{10}$  _____

3. $\frac{9}{10}$  _____

4. $\frac{3}{10}$  _____

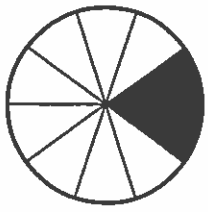
5. $\frac{7}{10}$  _____

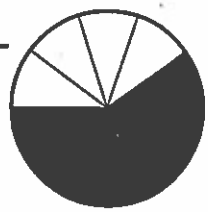
6. $\frac{4}{10}$  _____

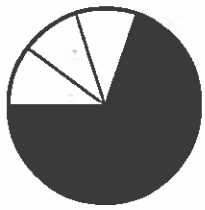
7. $\frac{6}{10}$  _____

8. $\frac{8}{10}$  _____

Name the shaded part of each fraction circle as a decimal.

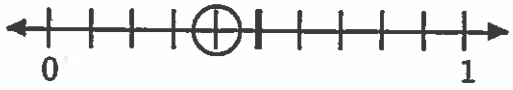
9. _____ $\frac{2}{10}$ 

10. _____ $\frac{6}{10}$ 

11. _____ $\frac{7}{10}$ 

Name each point on the number line as a decimal. The first one is done for you.

12. 0.4



13. _____

14. _____

15. _____

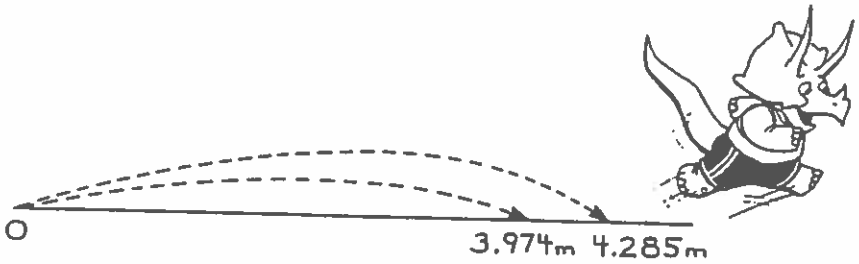
16. _____

17. _____

Rounding Decimal Numbers

Name _____

Jumping Jack made a jump of 3.974 m and a jump of 4.285 m.



Round these lengths to the nearest hundredth.
Look at the thousandths digit when rounding to the nearest hundredth.

The thousandths digit is 4.

3.97(4) Is the thousandths digit less than 5? yes → Round down.

3.974 rounded to the nearest hundredths is 3.97

4.28(5) Is the thousandths digit less than 5? no → Round up.

4.285 rounded to the nearest hundredth is 4.29

Circle the thousandths digit. Tell if you would round up or down to the nearest hundredth.

1. 8.98(2) down
2. 4.163 _____
3. 3.466 _____
4. 6.257 _____
5. 2.115 _____
6. 1.388 _____
7. 5.514 _____
8. 4.373 _____

Round these lengths to the nearest hundredth of a metre.

9. 2.284 2.28
10. 1.631 _____
11. 5.966 _____
12. 6.732 _____
13. 9.483 _____
14. 3.148 _____
15. 2.577 _____
16. 7.047 _____

L Name: _____ Date: _____

2.10 Comparing and Ordering Decimals Page 1

Student Book pages 70–72

GOAL

Compare and order decimals up to decimal thousandths.

Cotton-Ball Toss

Student	Distance (m)
Ali	1.15
Erica	0.45
Travis	0.92
Conor	0.77

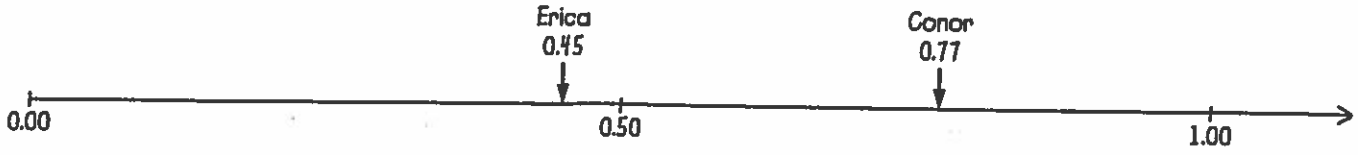
A Grade 5 class organized a cotton-ball toss for Olympics Day at their school. The results are in the chart.

How can you compare the tosses?

You can use **benchmarks** to compare numbers.
A benchmark is a familiar number, like 0 or 1.
Benchmarks often have a digit that is 1 or 5, and 0s for the other digits.
Some examples are 10, 50, 100, 0.1, 0.5, 0.10, and 0.50.
Compare Erica's distance with Conor's distance using a benchmark of 0.50.

benchmark

A familiar value that can be used to compare one number with another number



Was Erica's distance less than (<) 0.50 or greater than (>) 0.50? _____

Was Conor's distance less than 0.50 or greater than 0.50? _____

0.77 > 0.45

Whose distance was greater? _____

Compare Erica's distance of 0.45 m with Travis's distance of 0.92 m.

Was Erica's distance less than (<) 0.50 or greater than (>) 0.50? _____

Was Travis's distance less than 0.50 or greater than 0.50? _____

0.92 _____ 0.45

Whose distance was greater? _____

L Name: _____ Date: _____

2.10 Comparing and Ordering Decimals Page 2

You can use place value charts to compare numbers.

Erica's Distance

Hundreds	Tens	Ones	Tenths	Hundredths
			4	5

Conor's Distance

Hundreds	Tens	Ones	Tenths	Hundredths
			7	7

Which is greater, 7 tenths or 4 tenths? _____

$0.77 > 0.45$

So, _____'s distance is greater than _____'s distance.

Travis tossed the cotton ball _____ m. Conor tossed it _____ m.

Represent these distances on the place value charts below.

Travis's Distance

Hundreds	Tens	Ones	Tenths	Hundredths

Conor's Distance

Hundreds	Tens	Ones	Tenths	Hundredths

Compare the distances. 0.92 _____ 0.77

Whose distance is greater? _____

Reflecting

Which of the 4 students tossed the cotton ball the farthest? _____

How do you know?

_____

_____

C&P Name: _____ Date: _____

2.10 Comparing and Ordering Decimals Page 1

Student Book pages 70–72

Checking

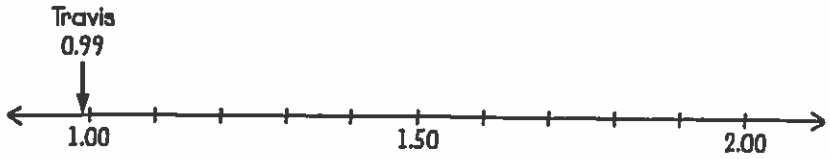
1. Here are the distances for the penny-flicking event on Olympics Day.

Penny-Flicking

Student	Distance (m)
Ali	1.02
Erica	1.20
Travis	0.99
Conor	1.15

a) Place each distance on the number line below.

Travis's distance has been done for you.



Write the distances in order from least to greatest.

_____

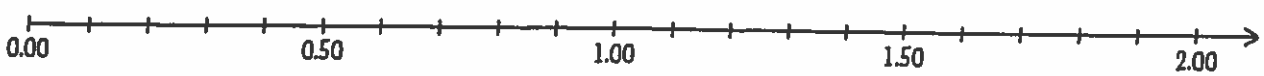
b) Which student flicked the penny the farthest? _____

Practising

2. For a craft, Jacqui needed:

- 1.6 m of string
- 1.2 m of wool
- 0.9 m of wire
- 0.1 m of ribbon

Place these materials on the number line below.



Order the lengths from least to greatest.

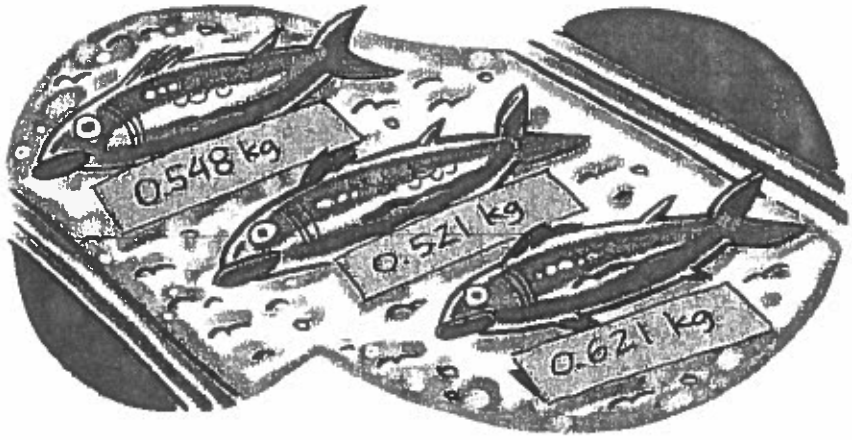
_____

C&P Name: _____ Date: _____

2.10 Comparing and Ordering Decimals Page 2

3. The masses of 3 salmon are 0.548 kg, 0.521 kg, and 0.621 kg.

Use either a number line or place value charts to compare the masses.



Hundreds	Tens	Ones	Tenths	Hundredths

Hundreds	Tens	Ones	Tenths	Hundredths

Hundreds	Tens	Ones	Tenths	Hundredths

Which salmon has the greatest mass? _____

Explain your strategy.

_____

_____

_____

Name: _____ Date: _____

Chapter 2 Lesson 10

Comparing and Ordering Decimals

GOAL

Compare and order decimals up to decimal thousandths.

1. Jolie's lunch cost $3.22. Sydney's lunch cost $4.21. Mateo's lunch cost $3.76.

a) Which lunch cost the most? _____

b) Which lunch cost the least? _____

c) Put the lunch costs in order from least cost to greatest cost.

_____

At-Home Help

Here are some ways to compare and order decimals:
- Use a place value chart.
- Use a number line.
- Use a thousandths grid.

2. Compare each pair of numbers using <, >, or =.

a) 4.0 ☐ 0.4

b) 0.20 ☐ 0.2

c) 5.3 ☐ 6.8

d) 0.45 ☐ 0.29

e) 6.72 ☐ 6.027

f) 1.515 ☐ 5.105

3. Order each set of numbers from greatest to least.

a) 5.68, 3.02, 6.33, 8.21, 4.99 _____

b) 0.831, 3.23, 0.996, 0.5, 1.005 _____

c) 0.090, 0.281, 0.300, 0.007, 0.111 _____

4. Jolie ran 0.074 km, Tyler ran 0.114 km, and Rachel ran 0.099 km. Who ran the shortest distance? Who ran the farthest?

_____

5. Sam, Brandon, Sydney, and Rachel made towers of bricks. They measured the heights of their towers.

Put the tower heights in order from least to greatest.

_____

Height of Towers

Student	Height (m)
Rachel	0.729
Sam	1.730
Brandon	0.972
Sydney	1.400

Comparing Decimal Numbers

Name _____

Compare 3.87 and 3.89.

To compare the numbers, line up the decimal points.

Compare the whole number parts.	Compare the tenths digits.	Compare the hundredths digits.
3.87 3.89 same	3.87 3.89 same	3.87 3.89 different

Draw a line when you compare.

3.89 is greater than 3.87

(>)

< means is less than.

Compare the numbers.

1. 8.81
   8.17

   8.81 > 8.17

2. 1.83
   1.84

   ____ > ____

3. 5.52
   5.42

   ____ > ____

Write > or <.

4. 8.48 ____ 7.84
5. 2.9 ____ 3.1
6. 6.11 ____ 6.24
7. 4.07 ____ 3.97
8. 9.25 ____ 9.27
9. 3.6 ____ 2.6
10. 5.3 ____ 5.4
11. 7.10 ____ 7.13
12. 8.74 ____ 8.76

Write in order from greatest to least.

13. 3.41, 3.56, 3.52 _____
14. 8.75, 8.83, 8.72 _____
15. 6.31, 6.18, 6.35 _____
16. 4.1, 4.3, 4.2 _____

Name: _____ Date: _____

Chapter 2 Test Yourself

Circle the correct answer.

1. What number is represented on the place value chart?

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones
●●		●●● ●	●	●	●●● ●●

A. 203 115 **C.** two hundred five thousand one hundred fifteen

B. 250 150 **D.** two hundred fifty thousand one hundred fifteen

2. Which number is greatest?

A. 800 000 + 60 000 **C.** 800 000 + 60 000 + 30

B. 800 000 + 6 000 + 300 **D.** They all have the same value.

3. Jolie rounded a number to the nearest hundred thousand, ten thousand, and thousand. She got 700 000, 720 000, and 719 000. Which number could Jolie have started with?

A. 719 201 **B.** 720 201 **C.** 719 701 **D.** 720 701

4. What is the standard form of the number 7 + 0.4 + 0.06 + 0.001?

A. 7.4061 **B.** 7.461 **C.** 7.4601 **D.** 74.06001

5. What is the equivalent decimal hundredth and decimal thousandth of 0.8?

A. 0.08 and 0.008 **C.** 800 and 8 000

B. 0.88 and 0.888 **D.** 0.80 and 0.800

6. Which pair of numbers round to the same hundredth?

A. 0.680 and 0.699 **C.** 0.582 and 0.679

B. 0.680 and 0.679 **D.** 0.699 and 0.582

7. Which comparison is not true?

A. 0.090 < 0.900 **B.** 1.6 > 2.5 **C.** 1.92 > 0.92 **D.** 0.284 > 0.274

Name: _____ Date: _____

Chapter Review—Frequently Asked Questions

STUDENT BOOK PAGES 73–76

Q: How are decimals such as 0.4, 0.40, and 0.400 alike?

A: _____

How are they different?

_____

Q: How can you compare and order decimals?

A: _____

Name: _____ Date: _____

Chapter 2 Test Page 1

1. At a Fall Forest Festival, a large container of acorns was used in an estimation contest. The person who guessed closest to the actual number won a prize. The container held 128 247 acorns.

   a) Model the number of acorns on a place value chart. Sketch your model.

Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones

/2

   b) Write the number of acorns in words.

   _____

2. Nicholas wrote three numbers in expanded form.
   Write these numbers in standard form.

   400 000 + 70 000 + 8000 = _____

   400 000 + 20 000 + 3000 + 600 + 50 + 2 = _____

   400 000 + 70 000 + 800 + 1 = _____

   Arrange them in order from least to greatest.

   _____, _____, _____

/3

/3

3. a) Arrange these numbers in order from least to greatest.
   565 127 565 120 566 112 556 121 556 128

   _____, _____, _____, _____, _____

/5

   b) List three numbers between 284 531 and 285 396.
   Each number should have six different digits.

   _____, _____, _____

/3

4. Bryne used 816 792 stitches to make a quilt.

   a) Write the words for the number of stitches.

   _____

   b) Round the number in a) to the nearest

   - hundred thousand _____
   - ten thousand _____
   - thousand _____

/4

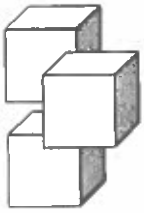
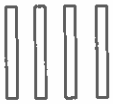
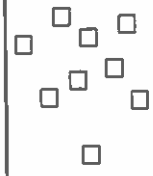
/20

Name: _____ Date: _____

Chapter 2 Test Page 2

5. Write each number in standard form.

a)

Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
					

_____

b) 1 + 0.8 + 0.02 + 0.006 _____

6. Write each number in words.

a) 0.370 _____

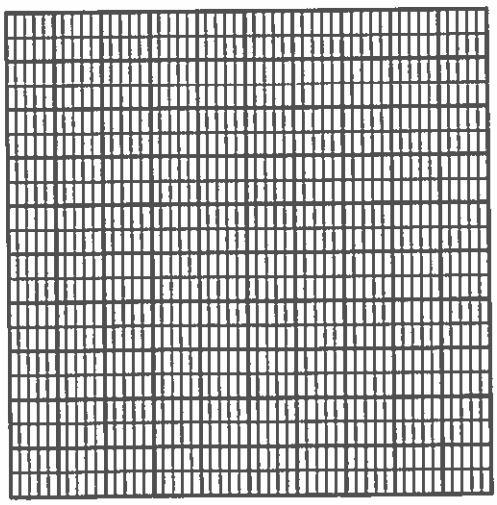
b) 0.004 _____

c) 2.185 _____

d) 0.406 _____

7. A pizza delivery business reported that, for every 1000 pizzas ordered, 390 are plain cheese.

a) Colour a thousandths grid to represent the portion of pizzas that are plain cheese.



b) Write a fraction with a denominator of 1000 for the coloured part. _____

Write a fraction with a denominator of 100 for the coloured part. _____

c) Write a decimal thousandth for the coloured part. _____

Write a decimal hundredth for the coloured part. _____

8. Olivia said that 20 of the 100 pages in her book have pictures. Karla said that is the same as saying 0.020 of the pages have pictures. Is Karla correct? Explain.

_____

_____

Name: _____ Date: _____

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9. Round each decimal to the nearest hundredth and to the nearest tenth.

a) 0.429 _____ _____

b) 1.074 _____ _____

c) 0.523 _____ _____

d) 6.458 _____ _____

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10. In a survey, 1000 people were asked to identify their favourite colour.

a) Write a decimal thousandth to represent each colour.

blue _____

red _____

green _____

purple _____

pink _____

/5

Favourite Colour

Colour	Number of votes
blue	359
red	293
green	189
purple	84
pink	75

b) Round each decimal to the nearest hundredth.

_____, _____, _____,

_____, _____

/5

c) In a group of 100 people, about how many might say red is their favourite colour?

about _____ people out of 100

/1

11. Arrange each set of numbers in order from least to greatest.

a) 4.032, 0.261, 0.008, 1.329

_____, _____, _____, _____

b) 0.092, 0.099, 0.909, 0.209

_____, _____, _____, _____

/8

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