Math Practice Sheets

Learning Numeration

Examples

Practice Questions

Extra Challenge Unit

Student Name

_____

Numeration in Thousands

Example

4,325 can be written using place value blocks or number line.

4,325

4,300   4,350   4,400
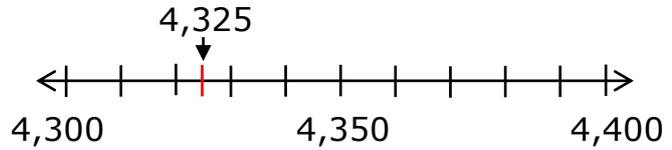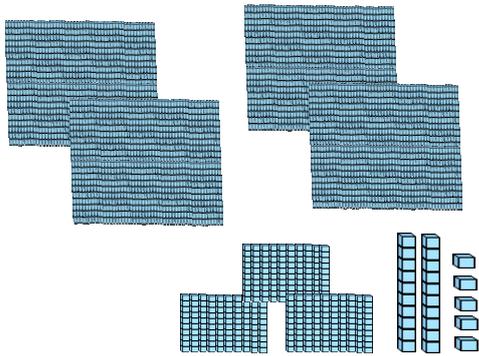
The number 4,325 has 4 digits.
The place value of 4 is 4,000.
The place value of 3 is 300.
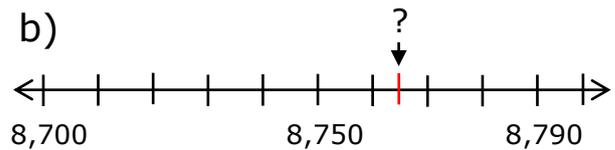The place value of 2 is 20.
The place value of 5 is 5.

4,325 = four thousand, three hundred twenty-five

The expanded form of 4,325 = 4,000 + 300 + 20 + 5

The standard form of 4,000 + 300 + 20 + 5 = 4,325

Exercise

1.   Write each of the following numbers in standard form.

a)

_____

b)

?

8,700   8,750   8,790

_____
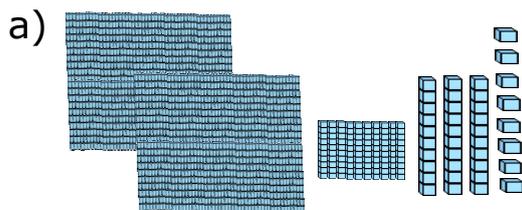
c)

5,000 + 600 + 80 + 1

_____

d)

70,000+3,000+900+20+6

_____

Two thousand, four hundred eighteen

_____

f)

Fifty-eight thousand, six hundred ninety-one

_____

Exercise

2. Write each number in expanded form and word form.

a)

3,162

_____+_____+_____+____

_____

b)

76,241

_____+_____+_____+____+___

_____

c)

294,856

_____+_____+_____+_____+_____+____

_____

3. Write the place value for each circled digit.

Numbers	8,2̲0̲3	3̲7,541	75̲,654	4̲63,457
Value	_____	_____	_____	_____

4. Circle the digit with the given place values.

Numbers	3,959	7,171	56,651	191,261
Value	900	7,000	6,000	100,000

Exercise

Solve the problems below.

5. The distance between the earth and the moon is 238,910 miles. Write this distance in expanded form and word form.

6. The least possible number using digits 1, 3, 5, and 9 is _____.

a) 9,531   b) 1,359

c) 1,395   d) 9,513

7. Write the greatest five-digit number that you can make from the digits 2, 4, 6, 7, and 8 using each digit exactly once.

8. In the number 29,134 ;

How many ten thousands are in the number?   _____
How many thousands?   _____
How many hundreds?   _____
How many tens?   _____
How many ones?   _____

It has ____ ten thousands, ____ thousands, ____ hundred, ____ tens, and ____ ones.

The number name is _____.

Unit 1.2	Numeration in Millions

Example

Period	Millions			Thousands			Units		
Value Name	Hundred Million 100,000,000	Ten Million 10,000,000	Million 1,000,000	Hundred Thousand 100,000	Ten Thousand 10,000	Thousand 1,000	Hundred 100	Ten 10	Ones 1

Numbers	Expanded form and word form
2,359,876	2,000,000+300,000+50,000+800+70+6 Two million, three hundred fifty-nine thousand, eight hundred seventy-six

Note: There are 3 periods-units (each separated by commas), thousands and millions. So, count from millions, thousands, and units periods respectively.

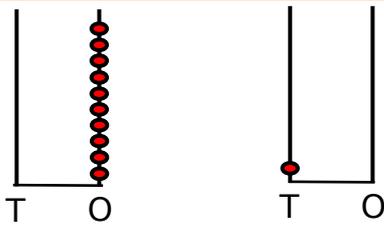Exercise

1. Write the following numbers in standard form.

a) 5,000,000 + 200,000 + 10,000 + 4,000 + 500 + 20 + 1

_____

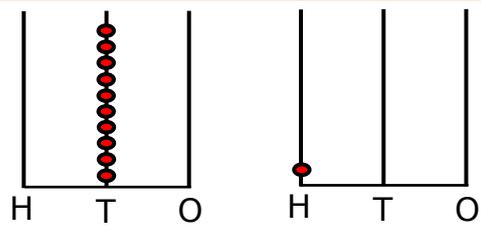b) 20,000,000 + 1,000,000 + 900,000 + 40,000 + 1,000 + 300 + 70 + 5

_____

c) 4,000,000 + 300,000 + 90,000 + 2,000 + 400 + 60 + 4

_____

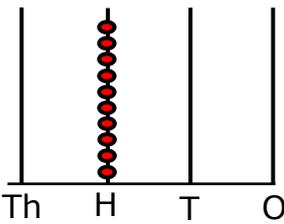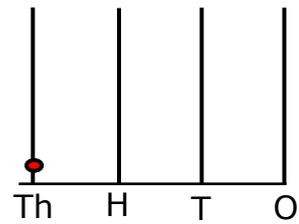d) 700,000,000 + 40,000,000 + 5,000,000 + 100,000 + 10,000 + 5,000 + 200 + 80 + 7

_____

Exercise

Solve the problems below.

2. 1,872,544 people visited Brookfield zoo last year. Write the number in expanded form and the number that is 3 million more than 1,872,544.

3. Which digit has the same value in both numbers 432,571,698 and 342,715,869?

   a) 3   b) 7

   c) 4   d) 2

4. Harry is writing the place value of the circled digits. Complete his work.

Numbers	Place value
438,001,521	8,000,000
50,117,424	
8,212,676	
591,214,507	90,000,000
932,123,765	

5. Mara wants to circle the digit whose place value is given. Complete her work.

Numbers	Place value
4,532,360	30,000
74,763,225	70,000,000
60,425,521	5,000
456,365,508	6,000,000
517,010,843	10,000,000

Unit 1.3	Place Values

Example

10 ones = 1 ten   10 tens = 1 hundred

10 hundreds = 1 thousand

- 1 ten makes ⟶ 10 ones
- 1 hundred makes ⟶ 10 tens
- 1 hundred makes ⟶ 100 ones
- 1 thousand makes ⟶ 10 hundreds
- 1 thousand makes ⟶ 100 tens
- 1 thousand makes ⟶ 1,000 ones

Exercise

1.   Convert into place values.

a) 400   =   _____ tens   =   _____ hundreds

b) 900   =   _____ ones   =   _____ tens

c) 500   =   _____ tens   =   _____ hundreds

d) 2,000   =   _____ tens   =   _____ thousands

e) 6,000   =   _____ ones   =   _____ tens

f) 8,000   =   _____ hundreds   =   _____ thousands

g) 7,000   =   _____ tens   =   _____ thousands

h) 3,000   =   _____ hundreds   =   _____ thousands

Place Values

Exercise

Solve the problems below.

2. Susan has 70 tens. How many hundred does Susan have? How many ones?

   Susan has _____ hundreds.

   She has _____ ones.

3. Which one does not satisfy "5 thousand makes" _____?

   a) 50 hundreds   b) 500 tens

   c) 50 thousands   d) 5,000 ones

4. Amy counted 400 tens. How many thousands does Amy have? How many hundreds?

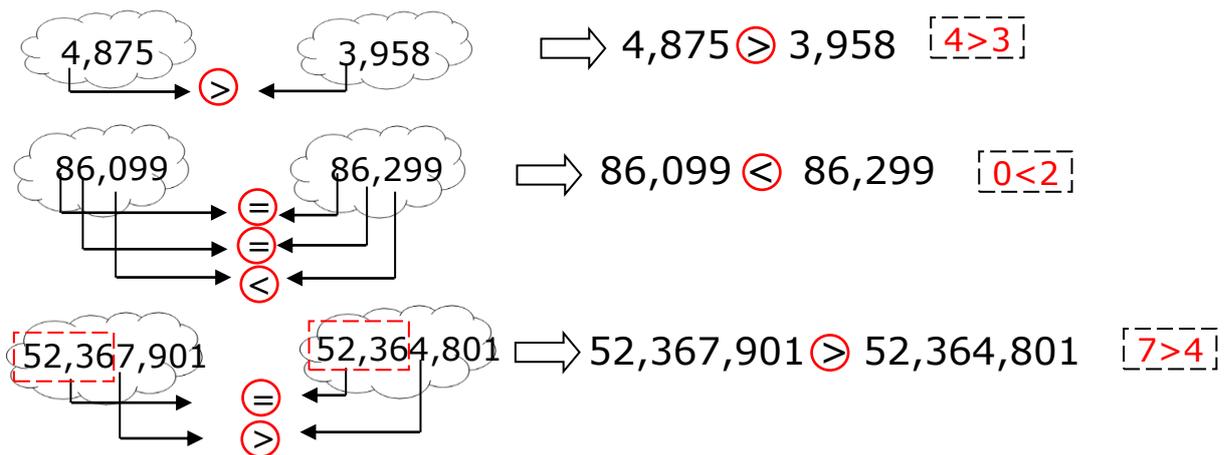5. How many ones, tens, and hundreds are there in 9,000?

Comparing and Ordering Numbers

Example

Let us learn to compare numbers.

Step I: The number having more digits is the larger number.

$$3,152 > 987 \text{ (3,152 has 4 digits)}$$

$$54,872,132 < 231,475,000 \text{ (231,475,000 has 9 digits)}$$

Step II: When two numbers which have the same number of digits are compared, we start comparing the digits from the left.

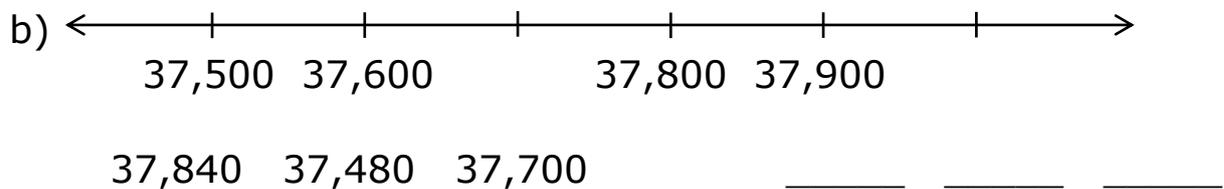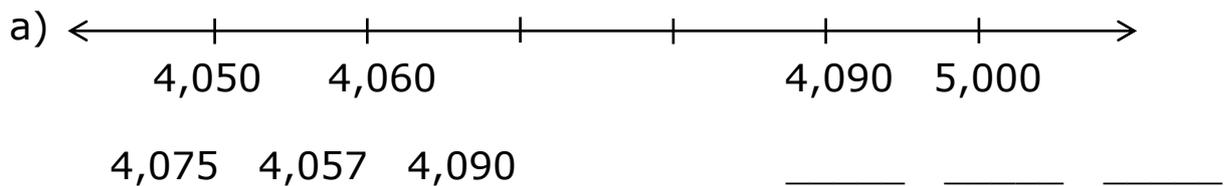4,875   >   3,958   ⟹   4,875 > 3,958   4>3

86,099   = = < 86,299   ⟹   86,099 < 86,299   0<2

52,367,901   = > 52,364,801   ⟹   52,367,901 > 52,364,801   7>4

Exercise

1. Compare the following using '>', '<', or '='.

   a) 87,594 _____ 7,899

   b) 98,061 _____ 980,605

   c) 2,596,240 _____ 2,596,199

   d) 5,472,905 _____ 5,472,905

   e) 91,753,000 _____ 91,735,000

   f) 156,259,013 _____ 149,259,888

   g) 34,631,675 _____ 34,731,675

   h) 780,952,130 _____ 781,985,260

Exercise

Solve the problems below.

2. Complete the following number lines and use them to order the numbers from greatest to least.

a)

4,050   4,060   4,090   5,000

4,075   4,057   4,090   _____   _____   _____

b)

37,500 37,600   37,800 37,900

37,840   37,480   37,700   _____   _____   _____

3. Asia is the largest continent on the earth with 17,212,000 square miles. This area is in between

a) 17,100,000 and 17,200,000   b) 17,100,000 and 17,000,212

c) 17,100,000 and 17,300,000   d) 17,100,000 and 17,020,000

4. There are 400,000 males and 450,000 females in a town. Write any three numbers between 400,000 and 450,000.

5. Write the area of the following states from least to greatest and greatest to least using given table.

State	Oregon	Montana	Wyoming	Oklahoma
Area (sq. mi.)	98,381	147,042	97,814	68,898

Least to greatest:

Greatest to least:

Rounding

Example

Round 57,364,529 to the nearest digit.

Tens	57,364,529 → 57,364,530	∵ 9 > 5
Hundreds	57,364,529 → 57,364,500	∵ 2 < 5
Thousands	57,364,529 → 57,365,000	∵ Hundreds digit is 5
Ten Thousands	57,364,529 → 57,360,000	∵ 4 < 5
Hundred Thousands	57,364,529 → 57,400,000	∵ 6 > 5
Millions	57,364,529 → 57,000,000	∵ 3 < 5

Note: If the digit to the right of the rounding place < 5, leave the rounding digit alone. If the digit to the right of the rounding digit is 5 to 9 add one to the rounding digit.

Exercise

1. Round each of the following numbers to the nearest 100, 1,000, and 10,000.

Numbers	Nearest 100	Nearest 1,000	Nearest 10,000
a) 64,683			
b) 489,826			
c) 271,354			
d) 75,968			
e) 856,537			
f) 9,247,169			

Exercise

Solve the problems below.

2. The population of Orlando, Florida is about 193,700. Round the population to nearest hundred thousand people.

3. A bank has 57,548,620 dollars. Round off the amount to the nearest million.

      a) 60,000,000   b) 58,000,000

      c) 57,000,000   d) 50,000,000

4. Airplane A traveled 81,567,200 miles and airplane B traveled 8,156,720 miles. Which airplane traveled fewer miles?
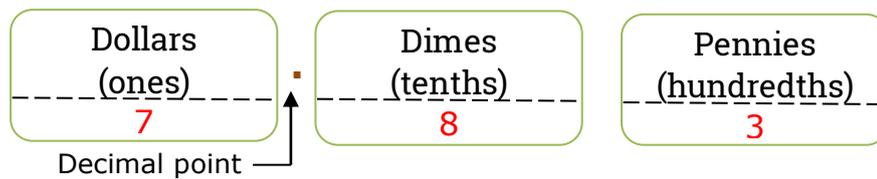
5. There are 275 pages in an English book, 225 pages in a Math book, and 250 pages in a Science book. Round the numbers to the nearest hundred. Also find the total number of pages in all three books.

Introducing Decimals Using Money

Example

A dime is one tenth of a dollar. A Penny is one hundredth of a dollar.

We can show $7.83 in place value chart.

Dollars (ones)		Dimes (tenths)	Pennies (hundredths)
_ _ _ _ _ _ _ _ _	.	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _
7		8	3

Decimal point

You can read as "seven dollars and eighty-three cents".

$7.83 = 7 dollars + 8 dimes + 3 pennies
∴ 7.83 = 7 ones + 8 tenths + 3 hundredths
or,
$7.83 = 7 dollars + 83 pennies
∴ 7.83 = 7 ones + 83 hundredths

Exercise

1. Complete the following.

   a) $4.92 = _ _ _ _ dollars + _ _ _ _ dimes + _ _ _ _ pennies

   4.92 = _ _ _ _ ones + _ _ _ _ tenths + _ _ _ _ hundredths

   b) $5.17 = _ _ _ _ dollars + _ _ _ _ dime + _ _ _ _ pennies

   5.17 = _ _ _ _ ones + _ _ _ _ hundredths

   c) $6.48 = _ _ _ _ dollars + _ _ _ _ dimes + _ _ _ _ pennies

   6.48 = _ _ _ _ ones + _ _ _ _ tenths + _ _ _ _ hundredths

Introducing Decimals Using Money

Exercise

Solve the problems below.

2. The cost of a toy bus is $9.25. Make a place value chart to show the cost of the bus.

$9.25

3. 8 dollars + 3 dimes + 1 penny is the same as

a) $8.13   b) $8.31

c) $3.81   d) $1.38

4. Matt is buying groceries for dinner. Ravioli costs $3.25, bread costs $0.35, and salad costs $1.15. Which food item is cheapest?

5. Crystal says 4 dollars + 9 dimes + 5 pennies is equal to $4.59. Eva says it is equal to $4.95. Who is correct? Explain.

Unit 1.7	Purchasing and Making Change

Example

How much money do you count?

First count the bills. So, $10 + $5 + $1 = $16
Then, count the remaining coins.
So, 50¢ + 25¢ + 10¢ + 5¢ + 1¢ = 91¢

i.e. $16.91   Sixteen dollars and ninety-one cents

Exercise

1. What is your change if you paid with the bills shown?

a) Cost: $18.24

Cost
$18.24 ⟶ $18.25 ⟶ $18.50 ⟶ $19.00 ⟶ $20.00

Amount paid

∴ The change is $_____.

b) Cost: $12.78

Cost   Amount paid

c) Cost: $13.86

Cost   Amount paid

Exercise

Solve the problems below.

2. Mitchell buys a vase for $18.39. He pays with a $20 bill. How much change does he get back?

3.

    shows

    a) $17.77   b) $18.77

    c) $19.77   d) $18.67

4. You have 3 quarters, 1 dime, and 1 nickel. What coin do you need to make $1.00?

5. Linda pays $5 to buy a marker.
    What is the least number of coins and bills Linda could get back as change? Explain.

$2.38

Problem Solving

Example

Using only hundreds and tens blocks, how many ways can you make 370?

Here, you can use only hundreds and tens blocks and all the combinations must show a total of 370.

So, record the combinations using an organized list.

Hundreds	3	2	1	0
Tens	7	17	27	37

i.e. there are 4 ways to make 370.

Your answer is reasonable because the combinations has 3 or fewer hundreds blocks.

Exercise

1. Using only hundreds blocks and tens blocks. List the ways to show 460.

2. List all the 3 digit numbers that fit these clues.

   - It is a 3-digit odd number.
   - The digit in the hundreds place is greater than 8.
   - The digit in the tens place is less than 2.

Exercise

Solve the problems below.

3. Mike has a mango, an apple, a banana, and an orange. He can take only two fruits at a time. How many different pairs of fruits can Mike take? List the pairs.

4. What two numbers have a sum 17 and a difference 1?

a) 10 and 7   b) 6 and 11

c) 12 and 5   d) 9 and 8

5. Tonya is making a prize bag. She has a book, a DVD, and a pen. She can take only two things. How many different pair of things can she put in the prize bag? List the pairs.

6. You are writing a 4-digit number using 2, 4, 5, and 7. Each number is used only once. What are the possible numbers you can write?

Math Challenges

Exercise

1. The Jacob Elementary School library has 24,650 books and 1,805 DVDs. This year, they bought 3,000 new books and 4,000 new DVDs. How many books does the library have now?

2. The area of the North America is 9,450,000 square miles. Write the number that is 3 hundred thousand more.

3. Mina and Ruby are interested in the planets. They found out that Saturn is about 74,566 miles wide and the Earth is about 7,926 miles wide. Compare the width of Saturn and the Earth. Which is greater?

4. Find two prime numbers whose sum is 10.

5. A baseball team gave away free hats to 10,915 fans. There were 14,795 people at the game. About how many fans did not get a free hat?

Exercise

6. Jasmine bought a pencil.
    She paid with a $1 bill. This is the change she got. How much did the pencil cost?

7. You have 5 coins worth $0.65. All of the coins are either quarters or dimes. How many of each coin do you have?

8. Use the table to answer the following questions.

Sandwich choices

Bread choices	Filling choices
Brown	Tuna
White	Turkey
	Ham

a) How many different kinds of sandwiches can you choose if you want brown bread?

b) How many different kinds of sandwiches can you choose if you don't want ham?

Congratulations!

You have finished a lesson. You should be very proud of yourself.
Now it is time to progress to the next lesson.
Your next assignment is notated by a green arrow.

Lesson 1   Learning Numeration
Lesson 2   Addition and Subtraction Part I
       Unit 2.1   Mental Addition and Subtraction
       Unit 2.2   Estimating Sums and Differences
       Unit 2.3   Addition and Subtraction of Whole Numbers
       Unit 2.4   Addition and Subtraction across Zeroes
       Unit 2.5   Addition and Subtraction Patterns over Increasing Place Values
       Unit 2.6   Math Challenges
Lesson 3   Addition and Subtraction Part II
Lesson 4   Multiplication Part I
Review 1   Review of Lesson 1, 2, 3, and 4
Lesson 5   Multiplication Part II
Lesson 6   Division
Lesson 7   Multiplying by 1-Digit Numbers Part I
Lesson 8   Multiplying by 1-Digit Numbers Part II
Review 2   Review of Lesson 5, 6, 7, and 8
Lesson 9   Algebra Part I
Lesson 10   Algebra Part II
Lesson 11   Multiplication Strategies
Lesson 12   Multiplication by 2-Digit Numbers
Review 3   Review of Lesson 9, 10, 11, and 12
Lesson 13   Dividing by 1-Digit Numbers Part I
Lesson 14   Dividing by 1-Digit Numbers Part II
Lesson 15   Geometry Part I
Lesson 16   Geometry Part II
Review 4   Review of Lesson 13, 14, 15, and 16
Lesson 17   Fractions
Lesson 18   Fraction Operation
Lesson 19   Decimals
Lesson 20   Decimal Number Operation
Review 5   Review of Lesson 17, 18, 19, and 20
Lesson 21   Measurement Part I
Lesson 22   Measurement Part II
Lesson 23   Solid and Measurement
Lesson 24   Graph
Review 6   Review of Lesson 21, 22, 23, and 24
Lesson 25   Equation and Function
Lesson 26   Transformation, Congruence, and Symmetry
Lesson 27   Probability
Review of Lesson 1 to 14
Review of Lesson 15 to 27

Unit 1.1

1. a) 2,138   b) 8,765   c) 5,681   d) 73,926   e) 2,418   f) 58,691
2. a) 3,000+100+60+2; three thousand, one hundred sixty-two
   b) 70,000+6,000+200+40+1; seventy-six thousand, two hundred forty-one
   c) 200,000+90,000+4,000+800+50+6; two hundred ninety-four thousand, eight hundred fifty-six
3. 200; 30,000; 5,000; 400,000
4. 3,959   7,171   56,651   191,261
5. 200,000+30,000+8,000+900+10; two hundred thirty-eight thousand, nine hundred ten
6. b   7. 87,642
8. 2; 9; 1; 3; 4; twenty-nine thousand, one hundred thirty-four

Unit 1.2

1. a) 5,214,521   b) 21,941,375
   c) 4,392,464   d) 745,115,287
2. 1,000,000+800,000+70,000+2,000+500+40+4; 4,872,544
3. d   4. 7,000; 600; 20,000
5. 74,763,225; 60,425,521; 456,365,508

Unit 1.3

1. a) 40 tens = 4 hundreds   b) 900 ones = 90 tens
   c) 50 tens = 5 hundreds   d) 200 tens = 2 thousands
   e) 6,000 ones = 600 tens   f) 80 hundreds = 8 thousands
   g) 700 tens = 7 thousands   h) 30 hundreds = 3 thousand
2. 7; 700   3. c
4. 4 thousands; 40 hundreds
5. 9,000 ones; 900 tens; 90 hundreds

Unit 1.4

1. a) >   b) <   c) >   d) =   e) >   f) >
   g) <   h) <
2. a) 4,090   4,075   4,057   b) 37,840   37,700   37,480
3. c
5. 68,898; 97,817; 98,381; 147,042 and 147,042; 98,381; 97,817; 68,898

Unit 1.5

1. a) 64,700; 65,000; 60,000   b) 489,800; 490,000; 49,000
   c) 271,400; 271,000; 270,000   d) 76,100; 76,000; 80,000
   e) 856,500; 857,000; 860,000   f) 9,247,200; 9,247,000; 9,250,000
2. 200,000   3. b   4. B   5. 300+200+300=800

Unit 1.6

1. a) 4; 9; 2 and 4; 9; 2   b) 5; 1; 7 and 5; 17   c) 6; 4; 8 and 6; 4; 8
2. 9 ones + 2 tenths + 5 hundredths   3. b   4. Bread   5. Eva

Unit 1.7

1. a) $1.76   b) $2.22   c) $6.14   2. $1.61   3. b   4. Dime 5. $2.62

Unit 1.8

1. 4,6; 3,16; 2,26; 1,36; 0,46 2. 911, 913, 915, 917, 919 3. 6   4. d   5. 3

Unit 1.9

1. 27,650   2. 9,750,000   3. 74,566 > 7,926; Saturn
4. 7 and 3   5. 4,000   6. 59¢   7. 1 quarter, 4 dimes