حل الوحدة الثالثة Relationships Number and Value Place من كتاب الطالب منهج ريفيل

موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف الخامس ⇦ رياضيات ⇦ الفصل الأول ⇦ حلول ⇦ الملف

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المزيد من مادة رياضيات:	ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس

التواصل الاجتماعي بحسب الصف الخامس

صفحة المناهج الإماراتية على فيسبوك					
المواد على تلغرام	التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات	

المزيد من الملفات بحسب الصف الخامس والمادة رياضيات في الفصل الأول

1	حل الوحدة الثانية Volume الحجم من كتاب الطالب منهج ريفيل
2	حل أوراق عمل الوحدة الرابعة Decimals Subtract and Add جمع وطرح الأعداد العشرية
3	أوراق عمل الوحدة الرابعة Decimals Subtract and Add جمع وطرح الأعداد العشرية
4	حل أوراق عمل مراجعة الوحدة الأولى منهج ريفيل
5	أوراق عمل مراجعة الوحدة الأولى منهج ريفيل

Learn

What are some ways to describe the relationship between the values of the digits in the number shown?

thousands	hundreds	tens	ones
7	7	7	7

You can describe the relationship between the place-value positions.

One Way Relate 7,000 to 700.

thousands	hundreds	tens	ones
7	7	7	7

$7{,}000 = 10 \times 700$

Each 7 is ten times the value of the 7 to the right.

Another Way Relate 700 to 7,000.

thousands	hundreds	tens	ones
7	7	7	7

700 is $\frac{1}{10}$ of 7,000.

Each 7 is $\frac{1}{10}$ the value of the 7 to the left.

Math is... Structure

What ideas have we learned before that were helpful in understanding this relationship?

A digit represents 10 times as much as it represents in the place to the right. It also represents $\frac{1}{10}$ the value of what it represents in the place to its left.

Work Together

What are two different ways to describe the relationship between the values of each digit 4 in 449,035?

Sample answer: 400,000 is 10 times 40,000; 40,000 is $\frac{1}{10}$ of 400,000

On My Own

MATH REPLAY | GO ONLINE

Name _____

Use the place-value chart to complete the sentence.

1. The value of the 6 in the hundreds place is __10__ times the value of the 6 in the __tens__ place.

hundred thousands	ten thousands	thousands	hundreds	tens	ones
	3	2	5	6	5
	7	3	6	1	0

Complete the sentences to describe the relationship between the values of each digit 4 and each digit 9 in the number 447,699.

2. The value of the digit 4 in the ten thousands place is __$\frac{1}{10}$__ the value of the digit 4 in the __hundred thousands__ place.
3. The value of the digit 9 in the __tens__ place is 10 times the value of the digit 9 in the __ones__ place.

Is each statement *true* or *false*?

4. The digit 3 in 5,630, is 10 times the value of the digit 3 in 342.
   false
5. The digit 3 in 5,630, is $\frac{1}{10}$ the value of the digit 3 in 342.
   true
6. The digit 3 in 5,630, is 10 times the value of the 3 in 13.
   true
7. The digit 3 in 5,630, is $\frac{1}{10}$ the value of the digit 3 in 13.
   false

8. On Tuesday, 600 people attended a play at the Children's Theatre. The same play had 6,000 attendees on Saturday.

   When you compare 600 attendees to 6,000 attendees, 600 is __$\frac{1}{10}$__ as much as 6,000.

9. How does the value of the 2 in the hundred thousands place relate to the value of the 2 in the ten thousands place?

hundred thousands	ten thousands	thousands	hundreds	tens	ones
2	2	9	0	3	5

Sample answer: 200,000 is 10 times the value of 20,000.

10. How does the value of the 7 in the thousands place relate to the value of the 7 in the ten thousands place?

hundred thousands	ten thousands	thousands	hundreds	tens	ones
4	7	7	3	0	0

Sample answer: 7,000 is $\frac{1}{10}$ the value of 70,000.

11. **STEM Connection** Studies show that the first observation of Halley's comet was in 466 B.C. What are two different ways to describe the relationship between the digits 6 in 466?

Sample answer: 60 is 10 times 6; 6 is $\frac{1}{10}$ of 60.

12. **Extend Your Thinking** Write a number so that the digit 5 has a value of 5,000 and is $\frac{1}{10}$ the value of the digit in the ten thousands place.

Sample answer: 855,482

Reflect

How did I think like a mathematician today?

Answers may vary.

Math is... Mindset

How did you show confidence that you were successful today?

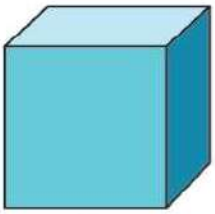
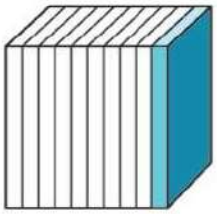
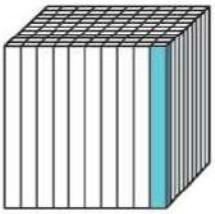
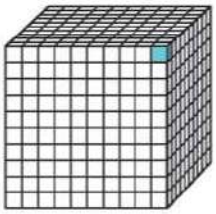
Learn

Keagan thinks that the value of each digit 1 is the same.

ones	tenths	hundredths	thousandths
1	1	1	1

How can you help Keagan make sense of this number?

Use a representation to show the value of each digit 1.

ones	tenths	hundredths	thousandths
			
1	$\frac{1}{10}$ or 0.1	$\frac{1}{100}$ or 0.01	$\frac{1}{1{,}000}$ or 0.001

The value of the digit 1 depends on its position in the number.

Math is... Patterns

How is the name of the position related to the fractional part of the whole?

A digit in one place in a decimal number represents 10 times as much as it represents in the place to its right. It also represents $\frac{1}{10}$ the value of what it represents in the place to its left.

Work Together

What are two different ways to describe the relationship between the 0.8 and 0.08?

Sample answer: 0.8 is ten times 0.08; 0.08 is $\frac{1}{10}$ of 0.8

On My Own

MATH REPLAY | GO ONLINE

Name _____

1. Which of the following statements is *true*?
   - A. 0.009 is ten times 0.09
   - B. 0.09 is ten times 0.009
   - C. 0.09 is $\frac{1}{10}$ of 0.009
   - D. 9 is $\frac{1}{10}$ of 0.9

2. Which of the following statements is *true*?
   - A. 0.003 is $\frac{1}{10}$ of 0.03
   - B. 0.03 is $\frac{1}{10}$ of 0.003
   - C. 0.3 is ten times 0.003
   - D. 3 is ten times 0.03

Marcella has $5.00, Niko has $0.50, and Benjamin has $0.05. Use this information to complete each sentence.

3. Benjamin has $\frac{1}{10}$ of the money Niko has.
4. Marcella has 10 times the money Niko has.

Complete each sentence.

5. $9.00 is 10 times $0.90.
6. $0.90 is $\frac{1}{10}$ of $9.00.

7. What are two different ways to describe the relationship between the values of each digit 4 in 3.244?

   Sample answer: 0.04 is ten times 0.004; 0.004 is $\frac{1}{10}$ of 0.04

8. What are two different ways to describe the relationship between the values of each digit 2 in 2.257?

   Sample answer: 2 is ten times 0.2; 0.2 is $\frac{1}{10}$ of 2

9. **Error Analysis** Toby writes the number 23.2 and says that the value of the digit 2 in the tens place is 10 times the value of the digit 2 in the tenths place. How do you respond to him?

Sample answer: I do not agree. 20 is not 10 times 0.2; 20 is 10 times 2; the value of the tens place is 10 times the value of the ones place.

10. For which numbers is the value of the digit 8 ten times the value of the digit 8 in the number 4.984?

(A.) 3.814 (B.) 5.820

C. 6.982 D. 8.492

11. **STEM Connection** The world's biggest submarine can sail at a speed of about 25.5 miles per hour on the surface. How can you describe the relationship between 5 and 0.5?

Sample answer: 5 is ten times 0.5; 0.5 is $\frac{1}{10}$ of 5

12. **Extend Your Thinking** Using only the digits 1, 4, and 5, write a number so that the value of the digit 5 is ten times the value of the digit 5 in the number 1.45. Write another number so that the value of the digit 4 is $\frac{1}{10}$ the value of the digit 4 in 1.45.

Sample answer: 1.54

Reflect

How is the relationship between the values of digits in a decimal the same as the relationship between the values of digits in a whole number?

Answers may vary.

Math is... Mindset

How have you felt calm when you felt angry?

Learn

How can you read the mass of the strawberries?

You can use a place-value chart to help you identify the value of each digit.

Decimal numbers can be written in expanded form.

tens	ones	tenths	hundredths	thousandths
3	4	6	1	8

$30 + 4 + 0.6 + 0.01 + 0.008$

$30 + 4 + \frac{6}{10} + \frac{1}{100} + \frac{8}{1{,}000}$

Standard form uses digits and a decimal point.

34.618

The word form helps you read decimal numbers.

tens	ones	tenths	hundredths	thousandths
3	4	6	1	8

thirty-four and six hundred eighteen thousandths

Math is... Precision

Why is it important to include *and* when reading a decimal number?

Reading and writing decimal numbers follows the same patterns as reading and writing whole numbers.

Work Together

Carly wrote 0.83 in expanded form using multiplication. Is her work correct? Explain your reasoning.

$8 \times \frac{1}{10} + 3 \times \frac{1}{100}$

Yes Check students' explanations.

On My Own

MATH REPLAY | GO ONLINE

Name _____

What is the word form of the decimal?

1. 8.2 **eight and two tenths**

2. 8.02 **eight and two hundredths**

3. 0.82 **eighty-two hundredths**

4. 0.082 **eighty-two thousandths**

What is the standard form of the decimal?

5. 0.9 + 0.03 + 0.007 **0.937**

6. 20 + 0.7 + 0.08 + 0.006 **20.786**

7. 5 + 0.01 + 0.009 **5.019**

8. $7 + \frac{4}{10} + \frac{5}{1{,}000}$ **7.405**

What is each decimal in standard form?
What is each decimal in expanded form?

9. ninety-three and six thousandths

93.006; 90 + 3 + 0.006

10. three and eight hundred forty-six thousandths

3.846; 3 + 0.8 + 0.04 + 0.006

11. two hundred twelve and fifteen thousandths

212.015; 200 + 10 + 2 + 0.01 + 0.005

12. seven hundred fifty-one thousandths

0.751; 0.7 + 0.05 + 0.001

13. **STEM Connection** The Andromeda galaxy is 2.537 million light years from Earth. How can you write this decimal number in expanded form and in word form?

2 + 0.5 + 0.03 + 0.007; two and five hundred thirty-seven thousandths

14. Kole wrote the decimal 34.821 in word form as *thirty-four eight hundred twenty-one thousandths*. Is he correct? Explain why or why not.

No; Sample answer: Kole forgot to add "and" after thirty-four.

15. **Extend Your Thinking** Write the word forms of 321,578 and 321.578. What is the same? Explain why those similarities exist.

Sample answer: Both have three hundred twenty-one because both have the digits 321 in either the thousands period or ones period; both have five hundred seventy-eight because both have the digits 578 in either the ones period or in the decimal positions.

Reflect

How is place value used when writing decimal numbers in expanded form?

Answers may vary.

Math is... Mindset

How have you been an active listener today?

Learn

Which bag weighs more?

3.281 kg 3.095 kg

Compare the digits in each place starting with the greatest place-value position.

ones	tenths	hundredths	thousandths
3	2	8	1
3	0	9	5

Both numbers have 3 ones.

2 tenths > 0 tenths

Math is... Thinking

Why was it not necessary to compare the hundredths place?

3.281 > 3.095. So, the purple bag weighs more than the red bag.

You can compare decimals the same way you compare multi-digit numbers.

Work Together

Compare the weights of these bags.

ones	tenths	hundredths	thousandths
3	2	8	1
3	9		

3.281 < 3.9

3.281 kg 3.9 kg

On My Own

MATH REPLAY | GO ONLINE

Name _____

Write >, <, or = in each ◯ to make a true comparison. You can use a place-value chart to help.

1. 7.790 < 8.7
2. 1.021 < 1.095
3. 6.55 > 5.66
4. 9.9 > 0.99
5. 3.41 = 3.41
6. 2.563 < 2.573

For exercises 7–9, use the cost of each school supply.

7. Do the pencils or the highlighters cost more?

   highlighters

8. Write a comparison statement for the cost of the pens and the pencils.

   Sample answer: 1.15 < 1.47

9. Which school supply is the most expensive? Which school supply is the least expensive? Explain how you know.

   Highlighters are the most expensive; Pens are the least expensive; Sample answer: 9 tenths is greater than 4 tenths and greater than 1 tenth.

10. Error Analysis An astronomer calculated that a comet traveled 192.40 kilometers. The astronomer wrote 192.4 kilometers on a chart. How do you respond to the astronomer?

Sample answer: I agree with the astronomer because 192.40 = 192.4.

11. Write a comparison statement that compares the speed of a quarter horse to the speed of a lion.

Sample answer: 88.5 > 80.5

88.5 km per hour

80.5 km per hour

12. Which of the following comparisons are *true*?

A. $0.773 > 1.773$

B. $101.020 = 101.02$

C. $0.04 < 0.4$

D. $0.321 < 0.0123$

13. Extend Your Thinking Use the digits 5, 7, 8, and 9 to create the greatest possible decimal number.

9	.	8	7	5

Reflect

How is comparing decimals similar to comparing whole numbers?

Answers may vary.

Math is... Mindset

How has a different perspective helped you with your work today?

Learn

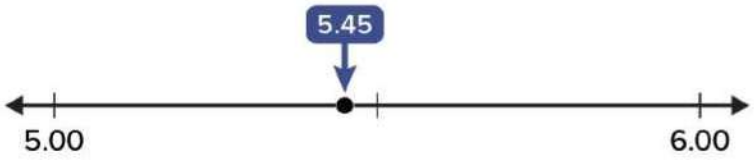
Maya and her sister want to buy a medium popcorn.

About how much money do they need?

You can round decimals to get a good estimate.

One Way Use a number line

Round to the ones.



The bag of popcorn costs about $5.00.

Math is... Precision

What do you notice about the estimate when rounding to lesser place value positions?

Another Way Use place value

to the ones	to the tenths
5.45	5.45
↓	↓
5.00	5.50

Rounding to the nearest tenths gives a better estimate.
Maya and her sister need about $5.50 to buy a medium popcorn.

You can round decimals using number lines or place value to make reasonable estimates. Think about how precise the estimate needs to be when deciding to which place you should round to.

Work Together

What is the weight of the pumpkin rounded to the nearest whole number? nearest tenth?

9 lb; 8.6 lb

On My Own

MATH REPLAY | GO ONLINE

Name _____

What is each decimal rounded to the nearest whole number? You can use a number line or place value.

1. 78.39 **78**
2. 4.07 **4**
3. 12.7 **13**
4. 15.55 **16**

What is each decimal rounded to the nearest tenth? You can use a number line or place value.

5. 42.89 **42.9**
6. 3.65 **3.7**
7. 16.12 **16.1**
8. 98.17 **98.2**

9. Danica rounded a number to the nearest tenth to get 14.7. What number could she have rounded to get this answer?

   Sample answer: 14.65

10. Which statements are *true*?

    A. The decimal 43.678 rounded to the nearest tenth is 43.6.

    B. The decimal 43.678 rounded to the nearest tenth is 43.7.

    C. The decimal 43.678 rounded to the nearest hundredth is 43.68.

    D. The decimal 43.678 rounded to the nearest hundredth is 43.67.

11. The masses of five different dogs are shown. Round each mass to the nearest whole number.

23; 25; 27; 26; 27

12. STEM Connection The mass of the sun takes up about 99.86% of the mass of our solar system. What is 99.86 rounded to the nearest tenth?

99.9

13. Which of the following numbers are closer to 100? Which are closer to 99?

99.03 99.87 99.49 99.27 99.72

99.87, 99.72 are closer to 100; 99.03, 99.49, 99.27 are closer to 99

14. Extend Your Thinking The price of a container of orange juice, rounded to the nearest one is $3.00. Between what two amounts could the actual price be?

Between $2.50 and $3.49

Reflect

How is rounding decimals similar to rounding whole numbers?

Answers may vary.

Math is... Mindset

How has being flexible in your thinking helped you make good decisions?

Review

7. Which statement correctly compares values of the digit 8 in 284,560 and 128,773? (Lesson 3-1)

A. The value of the digit 8 in 284,560 is $\frac{1}{10}$ the value of the digit 8 in 128,773.

B. The value of the digit 8 in 284,560 is 10 times the value of the digit 8 in 128,773.

C. The value of the digit 8 in 284,560 is 10,000 times the value of the digit 8 in 128,773.

8. Complete the sentence. (Lesson 3-3)

In standard form, the number *thirty-six and eight hundred fourteen thousandths is written* as **36.814**

9. Determine whether each comparison is *true* or *false*. (Lesson 3-4)

	True	False
$0.49 < 0.5$	✓	
$0.304 > 0.333$		✓
$0.019 < 0.09$	✓	
$0.08 > 0.81$		✓
$0.111 < 0.11$		✓
$0.68 = 0.068$		✓

10. Complete each sentence. (Lesson 3-5)

0.737 rounded to the nearest hundredth is **0.74**.

0.737 rounded to the nearest tenth is **0.7**.

11. Do the numbers round to 8.1 when rounded to the nearest tenth? Choose *yes* or *no*. (Lesson 3-5)

	Yes	No
7.99		✓
8.162		✓
8.074	✓	
8.13	✓	
8.012		✓

12. The table show the lengths of the tracks at Valley High School and Eastside High School. (Lesson 3-4)

School	Length of Track (in meters)
Valley H.S.	398.25
Eastside H.S.	398.09

Write a comparison using >, <, or =. **Sample answer: 398.25 > 398.09**

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13. Which of the following statements is *true*? (Lesson 3-2)

A. 0.002 is 10 times 0.02

B. 0.02 is $\frac{1}{10}$ of 0.002

C. 0.02 is 10 times 0.002

D. 2 is $\frac{1}{10}$ of 0.2

14. Complete the sentence. (Lesson 3-2)

7 is **10 times** 0.7.

15. Complete the sentence. (Lesson 3-2)

0.05 is **$\frac{1}{10}$ of** 0.5.

16. Complete the expanded form of the number 8.207. (Lesson 3-3)

$8 + 2 \times$ **$\frac{1}{10}$** $+$ **7** $\times \frac{1}{1{,}000}$

17. Write the decimal number in standard form. (Lesson 3-3)

$3 \times \frac{1}{100} + 9 \times \frac{1}{1{,}000}$

0.039

18. Write 44.259 in word form. (Lesson 3-3)

forty-four and two hundred fifty-nine thousandths

19. List three different decimal numbers that, when rounded to the nearest tenth, round to 3.2. (Lesson 3-5)

Sample answer: 3.21; 3.219; 3.18

20. Show two different ways to write the expanded form of the number 3.48. (Lesson 3-3)

Sample answer:

$3 + 0.4 + 0.08$;

$3 + \frac{4}{10} + \frac{8}{100}$

Performance Task

There are eight planets in our solar system. Each planet orbits the sun at different speeds. Some planets have no moons and some planets have multiple moons!

PART A. The table shows length of time it takes Jupiter and Saturn to orbit the Sun in relation to Earth's orbit. Complete the table to show the word form and the expanded form of each speed.

Name	Orbit Speed (in Earth years)		
	Standard Form	Word Form	Expanded Form
Jupiter	11.86	eleven and eighty-six hundredths	$10 + 1 + 0.8 + 0.06$
Saturn	29.4	twenty-nine and four tenths	$20 + 9 + 0.4$

PART B. Jupiter has 67 confirmed moons. Each moon orbits at different speeds. One moon takes 259.22 Earth days to orbit Jupiter and another one takes 259.653 Earth days. Use >, <, or = to compare the orbit speeds. Explain your answer.

$259.22 < 259.653$; Sample answer: 0.6 is greater than 0.2

Reflect

Explain how place value helps you understand the relationship between decimal places.

Answers may vary.

Unit 3

Unit Assessment, Form A

Name _____

1. Which statement about the digits in the number 39,906 is true?

A. The value of the digit 9 in the thousands place is 10 times the value of the digit 9 in the hundreds place.

B. The value of the digit 9 in the thousands place is $\frac{1}{10}$ the value of the digit 9 in the hundreds place.

C. The value of the digit 9 in the thousands place is 100 times the value of the digit 9 in the hundreds place.

D. The value of the digit 9 in the thousands place has the same value as the digit 9 in the hundreds place.

2. How can you write the number in standard form?

In standard form, the number *nine hundred two and fifty-one thousandths* is written **902.051**.

3. Look at the digit 7 in the numbers given in the place-value chart.

hundred thousands	ten thousands	thousands	hundreds	tens	ones
7	9	7	2	6	4
	7	0	1	3	8

Which statement is true? Choose all that apply.

A. 70,000 is $\frac{1}{10}$ of 700,000

B. 7,000 is 10 times 700,000

C. 70,000 is $\frac{1}{10}$ of 7,000

D. 7,000 is $\frac{1}{10}$ of 70,000

E. 70,000 is 10 times 7,000

4. Use the place value chart to complete the statement.

hundreds	tens	ones	tenths	hundredths	thousandths
4	6	5	5	5	1

The value of the digit 5 in the tenths place is $\frac{1}{10}$ the value of the digit 5 in the _____ place.

A. ones **B.** tenths **C.** hundredths

5. Is each comparison *True* or *False*?

		True	False
a.	$0.12 < 0.2$	✓	
b.	$0.407 > 0.446$		✓
c.	$0.089 < 0.09$	✓	
d.	$0.61 > 0.06$	✓	
e.	$0.555 < 0.55$		✓
f.	$0.34 = 0.034$		✓

6. A centimeter is 0.01 meter. A millimeter is 0.001 meter.

How does the length of 1 centimeter compare to the length of 1 millimeter? Explain your answer.

1 centimeter is 10 times the length of 1 millimeter; Sample answer: The digit 1 in 0.01 is ten times the value of the digit 1 in 0.001. So 1 centimeter is 10 times the length of 1 millimeter.

7. What is the expanded form of 405.072?

A. $40 + 5 + \frac{7}{100} + \frac{2}{1{,}000}$

B. $40 + 5 + \frac{7}{10} + \frac{2}{100}$

C. $400 + 5 + \frac{7}{10} + \frac{2}{100}$

D. $400 + 5 + \frac{7}{100} + \frac{2}{1{,}000}$