

Name _____

Date _____

1. Record the digits of the first factor on the top row of the place value chart. Draw arrows to show how the value of each digit changes when you multiply. Record the product on the second row of the place value chart. The first one has been done for you.

a. $4.582 \times 10 = \underline{45.82}$

			4	5	8	2	
			↓	↓	↓	↓	
		4	5	8	2		

b. $7.281 \times 100 = \underline{728.1}$

			7	2	8	1	
			↓	↓	↓	↓	
7	2	8	.	1			

c. $9.254 \times 1000 = \underline{9,254}$

			9	2	5	4	
			↓	↓	↓	↓	
9	2	5	4				

- d. Explain how and why the value of the 2 changed in (a), (b), and (c).

2. Record the digits of the dividend on the top row of the place value chart. Draw arrows to show how the value of each digit changes when you divide. Record the quotient on the second row of the place value chart. The first one has been done for you.

a. $2.46 \div 10 = \underline{0.246}$

b. $678 \div 100 = \underline{6.78}$

c. $67 \div 1000 = \underline{0.067}$

- d. Explain how and why the value of the 6 changed in the quotients in (a), (b), and (c).

3. Researchers counted 8,912 monarch butterflies on one branch of a tree at a site in Mexico. They estimated that the total number of butterflies at the site was 1000 times as large. About how many butterflies were at the site in all? Explain your thinking and include a statement of the solution.

$$8,912 \times 1,000 = 8,912,000$$

4. A student used his place value chart to show a number. After the teacher instructed him to divide his number by 100, the chart showed 28.003. Draw a picture of what the place value chart looked like at first.

2	8	0	0	•	3		
		2	8	.	0	0	3

- a. Explain how you decided what to draw on your place value chart. Be sure to include your reasoning about how the value of the digits was affected by the division.

5. On a map, the perimeter of a park is 0.251 meters. The actual perimeter of the park is 1000 times as large. What is the actual perimeter of the park? Explain how you know using a place value chart.

$$0.251 \times 1,000 = 251 \text{ meters}$$

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1. Solve.

a. $36,000 \times 10 =$ 360,000

e. $0.24 \times 100 =$ 24

b. $36,000 \div 10 =$ 3,600

f. $24 \div 1000 =$ 0.024

c. $4.3 \times 10 =$ 43

g. $4.54 \times 1000 =$ 4,540

d. $4.3 \div 10 =$ 0.43

h. $3045.4 \div 100 =$ 30.454

2. Find the products.

a. $14,560 \times 10 =$ 145,600

b. $14,560 \times 100 =$ 1,456,000

c. $14,560 \times 1000 =$ 14,560,000

d. Explain how you decided on the number of zeros in the products for (a), (b), and (c).

3. Find the quotients.

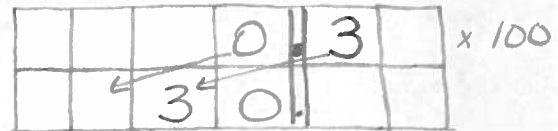
a. $1.65 \div 10 =$ 0.165

b. $1.65 \div 100 =$ 0.0165

c. Explain how you decided where to place the decimal in the quotients in (a), (b), and (c).

4. Ted says that 3 tenths multiplied by 100 equal 300 thousandths. Is he correct? Use a place value chart to explain your answer.

$$0.3 \times 100 = 0.300$$



No, it would be 30 as the number should get larger when multiplied. 300 thousandths is equivalent to 3 tenths

5. Alaska has a land area of about 1,700,000 km². Florida has a land area $\frac{1}{10}$ the size of Alaska. What is the land area of Florida? Explain how you found your answer.

$$1,700,000 \div 10 = 170,000 \text{ km}^2$$

$$\begin{array}{r} 1,700,000 \\ \hline 10 \end{array}$$

$$1,700,000 \times \frac{1}{10} =$$

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1. Write the following in exponential form (e.g., $100 = 10^2$).

a. $1000 = 10^3$

d. $100 \times 10 = 10^3$

b. $10 \times 10 = 10^2$

e. $1,000,000 = 10^6$

c. $100,000 = 10^5$

f. $10,000 \times 10 = 10^5$

2. Write the following in standard form (e.g., $4 \times 10^2 = 400$).

a. $4 \times 10^3 = 4,000$

e. $6.072 \times 10^3 = 6,072$

b. $64 \times 10^4 = 640,000$

f. $60.72 \times 10^4 = 607,200$

c. $5300 \div 10^2 = 53$

g. $948 \div 10^3 = 0.948$

d. $5,300,000 \div 10^3 = 5,300$

h. $9.4 \div 10^2 = 0.094$

3. Complete the patterns.

a. 0.02 0.2 2 20 200 2,000

b. 3,400,000 34,000 340 3.4 0.034

c. 85,700 8,570 857 85.7 8.57 0.857

d. 444 4440 44,400 444,000 4,440,000 44,400,000

e. 0.095 9.5 950 95,000 9,500,000 950,000,000

4. After a lesson on exponents, Tia went home and said to her mom, "I learned that 10^4 is the same as 40,000." She has made a mistake in her thinking. Use words, numbers or a place value chart to help Tia correct her mistake.

$$10^4 = 10,000$$

* not multiplying by the 4

5. Solve $247 \div 10^2$ and 247×10^2 .

$$\overset{\wedge}{2.47} \quad \overset{\wedge}{24,700}$$

- a. What is different about the two answers? Use words, numbers or pictures to explain how the decimal point shifts.

\div results in a smaller # ($247 \div 10^2 = 2.47$)

\times results in a larger # ($247 \times 10^2 = 24,700$)

- b. Based on the answers from the pair of expressions above, solve $247 \div 10^3$ and 247×10^3 .

$$247 \div 10^3 = 0.247$$

$$247 \times 10^3 = 247,000$$

Name _____

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1. Convert:

- a. 5 meters to centimeters

$$5 \text{ m} \times \frac{100}{1} = 500 \text{ cm}$$

- b. 60 centimeters to meters

$$60 \text{ cm} \div \frac{100}{1} = 0.6 \text{ m}$$

- c. 2300 milliliters to liters.

$$2.3 \text{ L} \times \frac{1,000}{1} = 2,300 \text{ ml}$$

error

- d. 0.462 liters to milliliters

$$0.462 \text{ L} \times \frac{1,000}{1} = 462 \text{ ml}$$

not 1 = L for liters

- e. 80.4 kilometers to meters

$$80.4 \times 1,000 = 80,400 \text{ m}$$

- f. 0.725 kilometers to meters

$$0.725 \times 1,000 = 725 \text{ m}$$

- g. 456 grams to kilograms

$$456 \div 1,000 = 0.456 \text{ kg}$$

- h. 0.3 kilograms to grams

$$0.3 \times 1,000 = 300 \text{ g}$$

2. Read each aloud as you write the equivalent measures.

a. 2.7 km = 2 km 700 m

b. 3.46 l = 3 l 460 ml

c. 5.005 kg = 5 kg 5 g

d. 8 ml = 0.008 l

e. 4079 g = 4.079 kg

3. A dining room table measures 1.78 m long. Express this measurement in millimeters.

- a. Explain your thinking using a place value chart.

1000	100	10	1	0.1	0.01
			1	7	8
1	7	8	0		

- b. Explain your thinking using an equation that includes an exponent.

$$1.78\text{ m} \times 10^3 = 1,780\text{ mm}$$

$$1\text{ m} = 1,000\text{ mm}$$

4. Eric and YiTing commute to school every day. Eric walks 0.81 km and YiTing walks 0.65 km. How far did each of them walk in meters? Explain your answer using an equation that includes an exponent.

$$\text{Eric } 0.81\text{ km} \times 10^3 = 810\text{ m}$$

$$\text{YiTing } 0.65\text{ km} \times 10^3 = 650\text{ m}$$

5. There were 9 children at a birthday party. Each child drank one 200 ml juice box. How many liters of juice did they drink altogether? Explain your answer using an equation that includes an exponent.

$$\begin{array}{r} 200\text{ ml} \\ \times 9 \\ \hline 1,800\text{ ml} \end{array}$$

$$1,800\text{ ml} \div 10^3 = 1.8\text{ L}$$



COMMON
CORE

Lesson 4:

Date:

Use exponents to denote powers of 10 with application to metric conversions.
6/28/13



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1.A.55

Name _____

Date _____

1. Express as decimal numerals. The first one is done for you.

a. Five thousandths	0.005
b. Thirty-five thousandths	0.035
c. Nine and two hundred thirty-five thousandths	9.235
d. Eight hundred and five thousandths	800.005
e. $\frac{8}{1000}$	0.008
f. $\frac{28}{1000}$	0.028
g. $7\frac{528}{1000}$	7.528
h. $300\frac{502}{1000}$	300.502

2. Express in words.

- a. 0.008 Eight thousandths
- b. 15.062 Fifteen and sixty-two thousandths
- c. 607.409 Six hundred seven and four hundred nine thousandths

3. Write the number on a place value chart then write it in expanded form using fractions or decimals to express the decimal place value units. The first one is done for you.

- a. 27.346

tens	ones		tenths	hundredths	thousandths
2	7	•	3	4	6

$$27.346 = 2 \times 10 + 7 \times 1 + 3 \times \left(\frac{1}{10}\right) + 4 \times \left(\frac{1}{100}\right) + 6 \times \left(\frac{1}{1000}\right)$$

OR

$$27.346 = 2 \times 10 + 7 \times 1 + 3 \times 0.1 + 4 \times 0.01 + 6 \times 0.001$$

b. 0.362

hundreds	tens	ones	•	tenths	hundredths	thousandths
		0	•	3	6	2

c. 49.564

hundreds	tens	ones	•	tenths	hundredths	thousandths
	4	9	•	5	6	4

4. Write a decimal for each of the following. Use a place value chart to help if necessary.

a. $3 \times 10 + 5 \times 1 + 2 \times \left(\frac{1}{10}\right) + 7 \times \left(\frac{1}{100}\right) + 6 \times \left(\frac{1}{1000}\right)$ 35.276

b. $9 \times 100 + 2 \times 10 + 3 \times 0.1 + 7 \times 0.001$ 920.307

c. $5 \times 1000 + 4 \times 100 + 8 \times 1 + 6 \times \left(\frac{1}{100}\right) + 5 \times \left(\frac{1}{1000}\right)$ 5408.065

5. At the beginning of a lesson, a piece of chalk is 2.967 of an inch. At the end of lesson, it's 2.308 of an inch. Write the two amounts in expanded form using fractions.

a. At the beginning of the lesson:

$$2 \times 1 + 9 \times \left(\frac{1}{10}\right) + 6 \times \left(\frac{1}{100}\right) + 7 \times \left(\frac{1}{1000}\right)$$

b. At the end of the lesson:

$$2 \times 1 + 3 \times \left(\frac{1}{10}\right) + 8 \times \left(\frac{1}{1000}\right)$$

6. Mrs. Herman asked the class to write an expanded form for 412.638. Nancy wrote the expanded form using fractions and Charles wrote the expanded form using decimals. Write their responses.

Nancy: $4 \times 100 + 1 \times 10 + 2 \times 1 + 6 \times \left(\frac{1}{10}\right) + 3 \times \left(\frac{1}{100}\right) + 8 \times \left(\frac{1}{1000}\right)$

Charles: $4 \times 100 + 1 \times 10 + 2 \times 1 + 6 \times 0.1 + 3 \times 0.01 + 8 \times 0.001$

Name _____

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1. Use
- $>$
- ,
- $<$
- , or
- $=$
- to compare the following.

a. 16.45	$<$	16.454
b. 0.83	$=$	$\frac{83}{100}$
c. $\frac{205}{1000}$	$=$	0.205
d. 95.045	$<$	95.545
e. 419.10	$>$	419.099
f. Five ones and eight tenths	$>$	Fifty-eight tenths
g. Thirty-six and nine thousandths	$<$	Four tens
h. One hundred four and twelve hundredths <i>104.12</i>	$>$	One hundred four and two thousandths <i>104.002</i>
i. One hundred fifty-eight thousandths <i>.158</i>	$<$	0.58
j. 703.005	$<$	Seven hundred three and five hundredths <i>703.05</i>

2. Arrange the numbers in increasing order.

a. 8.08 8.081 8.09 8.008

8.008, 8.08, 8.081, 8.09

b. 14.204 14.200 14.240 14.210

14.200, 14.204, 14.210, 14.240

Lesson 6:

Date:

Compare decimal fractions to the thousandths using like units and express comparisons with $>$, $<$, and $=$.

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1.B.26

3. Arrange the numbers in decreasing order.

a. 8.508 8.58 7.5 7.058

8.58, 8.508, 7.5, 7.058

b. 439.216 439.126 439.612 439.261

439.612, 439.261, 439.216, 439.126

4. James measured his hand. It was 0.17 meters. Jennifer measured her hand. It was 0.165 meters. Whose hand is bigger? How do you know?

James

5. In a paper airplane contest, Marcel's plane travels 3.345 meters. Salvador's plane travels 3.35 meters. Jennifer's plane travels 3.3 meters. Based on the measurements, whose plane traveled the farthest distance? Whose plane traveled the shortest distance? Explain your reasoning using a place value chart.

Marcel 3.345
 Salvador 3.35 Farthest
 Jennifer 3.3 Shortest

ones	.	tenths	hundredths	thousandths	
3	.	3	4	5	Marcel -
3	.	3	5	0	Salvador Farthest
3	.	3	0	0	Jennifer - Shortest

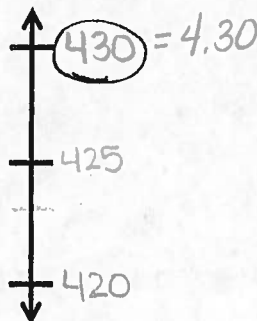
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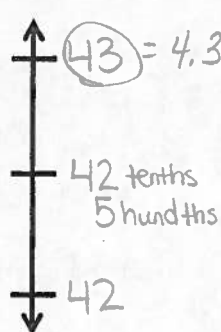
Round to the given place value. Label the number lines to show your work. Circle the rounded number. Use a separate sheet to show your decompositions for each one.

1. 4.3

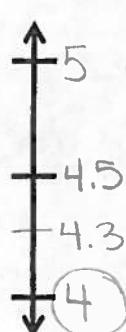
a. hundredths



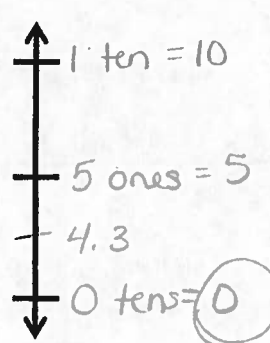
b. tenths



c. ones

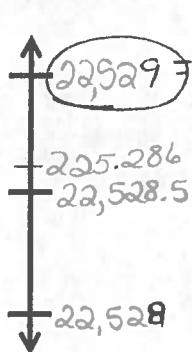


d. tens

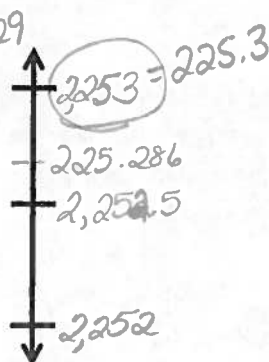


2. 225.286

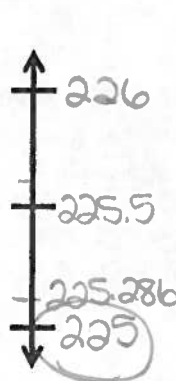
a. hundredths



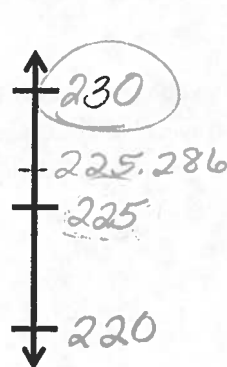
b. tenths



c. ones

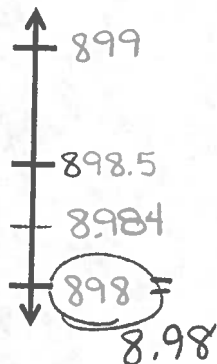


d. tens

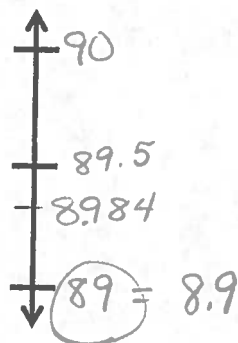


3. 8.984

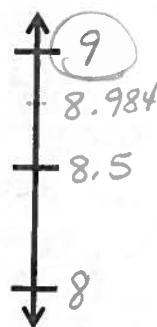
a. hundredths



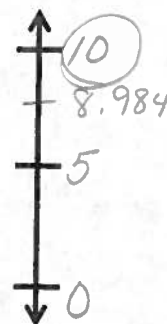
b. tenths



c. ones

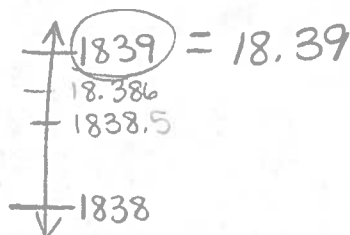


d. tens



4. On a major League Baseball diamond, the distance from the pitcher's mound to home plate is 18.386 meters.

a. Round this number to the nearest hundredth of a meter to estimate the distance. Use a number line to show your work.



b. About how many centimeters is it from the pitcher's mound to home plate?

$$18.39 \times 100 = 1,839 \text{ cm}$$

5. Jules reads that one pint is equivalent to 0.473 liters. He asks his teacher how many liters there are in a pint. His teacher responds that there are about 0.47 liters in a pint. He asks his parents, and they say there are about 0.5 liters in a pint. Jules says they are both correct. How can that be true? Explain your answer.

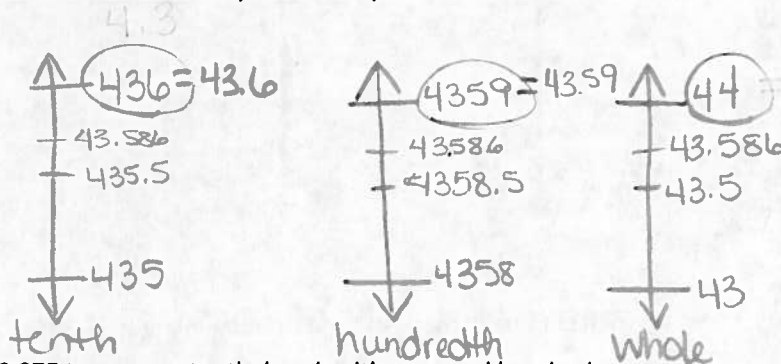
Teacher rounded to nearest hundredth.
Parents rounded to nearest tenth.

Name _____

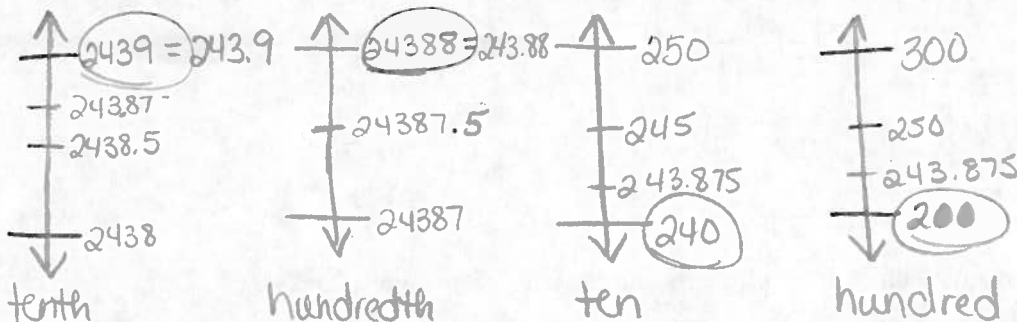
Date _____

1. Round the quantity to the given place value. Draw number lines to explain your thinking. Circle the rounded value on the number line.

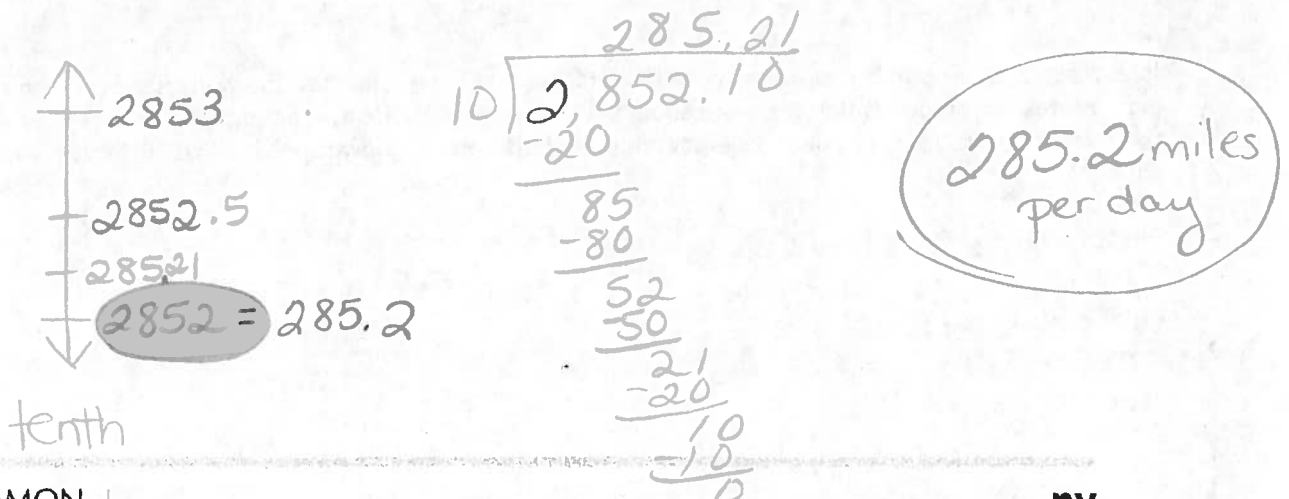
- a. 43.586 to nearest tenth, hundredth, and whole number



- b. 243.875 to nearest tenth, hundredth, ten, and hundred

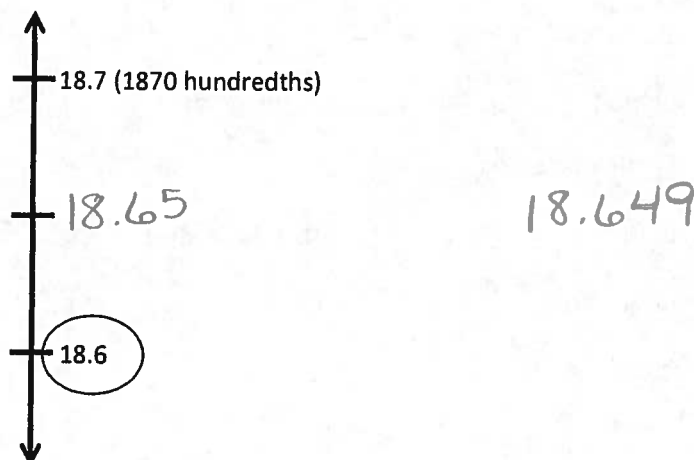


2. A trip from New York City to Seattle is 2,852.1 miles. A family wants to make the drive in 10 days, driving the same number of miles each day. About how many miles will they drive each day? Round your answer to the nearest tenth of a mile.

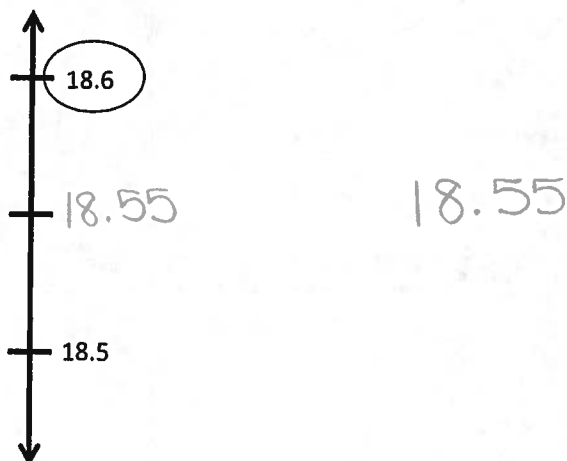


3. A decimal number has two digits to the right of its decimal point. If we round it to the nearest tenth, the result is 18.6.

- a. What is the maximum possible value of this decimal? Use words and the number line to explain your reasoning.



- b. What is the minimum possible value of this decimal? Use words, numbers and pictures to explain your reasoning.



Name _____

Date _____

1. Solve.

a. 3 tenths + 4 tenths = 7 tenths

b. 12 tenths + 9 tenths = 21 tenths = 2 one(s) 1 tenth(s)

c. 3 hundredths + 4 hundredths = 7 hundredths

d. 27 hundredths + 7 hundredths = 34 hundredths = 3 tenths 4 hundredths

e. 4 thousandths + 3 thousandths = 7 thousandths

f. 39 thousandths + 5 thousandths = 44 thousandths = 4 hundredths 4 thousandths

g. 5 tenths + 7 thousandths = 57 thousandths

h. 4 ones 4 tenths + 4 tenths = 48 tenths

i. 8 thousandths + 6 ones 8 thousandths = 76 thousandths

2. Solve using the standard algorithm.

a. $0.4 + 0.7 = \underline{1.1}$ $\begin{array}{r} 0.4 \\ + 0.7 \\ \hline 1.1 \end{array}$	b. $2.04 + 0.07 = \underline{2.11}$ $\begin{array}{r} 2.04 \\ + 0.07 \\ \hline 2.11 \end{array}$
c. $6.4 + 3.7 = \underline{10.1}$ $\begin{array}{r} 6.4 \\ + 3.7 \\ \hline 10.1 \end{array}$	d. $56.04 + 3.07 = \underline{59.11}$ $\begin{array}{r} 56.04 \\ + 3.07 \\ \hline 59.11 \end{array}$

e. $72.564 + 5.137 = \underline{77.701}$

$$\begin{array}{r} 72.564 \\ + 5.137 \\ \hline 77.701 \end{array}$$

f. $75.604 + 22.296 = \underline{97.900}$

$$\begin{array}{r} 75.604 \\ + 22.296 \\ \hline 97.900 \end{array}$$

3. Walkway Over the Hudson, a bridge that crosses the Hudson River in Poughkeepsie, is 2.063 kilometers. Anping Bridge, which was built in China 850 years ago, is 2.07 kilometers long.

- a. Which bridge is longer? How much longer? Show your thinking.

longer → Hudson 2.063
Anping 2.07

$$\begin{array}{r} 2.070 \\ - 2.063 \\ \hline 0.007 \text{ km longer} \end{array}$$

- b. Leah likes to walk her dog on the Walkway Over the Hudson. If she walks across and back, how far do she and her dog walk?

$$\begin{array}{r} 2.063 \\ + 2.063 \\ \hline 4.126 \text{ km} \end{array}$$

4. For his parents' anniversary, Danny spends \$5.87 on a photo. He also buys 3 balloons for \$2.49 each and a box of strawberries for \$4.50. How much money does he spend all together?

$$\begin{array}{r} \$5.87 \\ \$4.50 \\ + \$7.47 \\ \hline \$17.84 \end{array}$$

$$\begin{array}{r} \$2.49 \\ \times 3 \text{ balloons} \\ \hline \$7.47 \end{array}$$

$$\begin{array}{r} 2.49 \\ 2.49 \\ + 2.49 \\ \hline 7.47 \end{array}$$



COMMON CORE

Lesson 9:

Date:

Add decimals using place value strategies and relate those strategies to a written method.

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1.D.15

Name _____

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1. Subtract. You may use a place value chart.

a. 9 tenths $-$ 3 tenths = 6 tenth

b. 9 ones 2 thousandths $-$ 3 ones = 6 ones 2 thousandths

c. 4 hundreds 6 hundredths $-$ 3 hundredths = 4 hundreds 3 hundredths

d. 56 thousandths $-$ 23 thousandths = 33 thousandths

= 3 hundredths 3 thousandths

2. Solve using the standard algorithm.

a. $1.8 - 0.9 = \underline{0.9}$ $\begin{array}{r} 1.8 \\ - 0.9 \\ \hline 0.9 \end{array}$	b. $41.84 - 0.9 = \underline{39.94}$ $\begin{array}{r} 41.84 \\ - 0.90 \\ \hline 39.94 \end{array}$	c. $341.84 - 21.92 = \underline{319.92}$ $\begin{array}{r} 341.84 \\ - 21.92 \\ \hline 319.92 \end{array}$
d. $5.182 - 0.09 = \underline{5.092}$ $\begin{array}{r} 5.182 \\ - 0.090 \\ \hline 5.092 \end{array}$	e. $50.416 - 4.25 = \underline{46.166}$ $\begin{array}{r} 50.416 \\ - 4.250 \\ \hline 46.166 \end{array}$	f. $741. - 3.91 = \underline{737.09}$ $\begin{array}{r} 741.00 \\ - 3.91 \\ \hline 737.09 \end{array}$

3. Solve.

a. 30 tens – 3 tens 3 tenths $\begin{array}{r} 29 \\ 30.0 \\ - 3.3 \\ \hline 26.7 \end{array}$	b. 5 – 16 tenths $\begin{array}{r} 4 \\ 5.0 \\ - 1.6 \\ \hline 3.4 \end{array}$	c. 24 tenths – 1 one 3 tenths $\begin{array}{r} 2.4 \\ - 1.3 \\ \hline 1.1 \end{array}$
d. 6 ones 7 hundredths – 2.3 $\begin{array}{r} 5 \\ 6.07 \\ - 2.30 \\ \hline 3.77 \end{array}$	e. 8.246 – 5 hundredths $\begin{array}{r} 8.246 \\ - 0.050 \\ \hline 8.196 \end{array}$	f. 5 ones 3 tenths – 0.53 $\begin{array}{r} 4 \\ 5.30 \\ - 0.53 \\ \hline 4.77 \end{array}$

4. Mr. House wrote 8 tenths minus 5 hundredths on the board. Maggie said the answer is 3 hundredths because 8 minus 5 is 3. Is she correct? Explain.

No

$$\begin{array}{r} 7 \\ 0.80 \\ - 0.05 \\ \hline 0.75 \end{array}$$

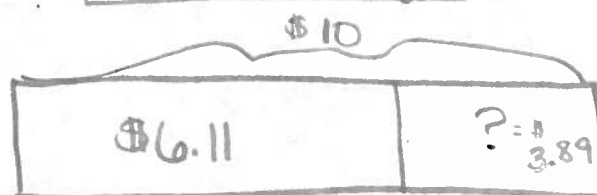
5. A clipboard costs \$2.23. It costs \$0.58 more than a notebook. Lisa buys two clipboards and one notebook, and paid with a ten dollar bill. Use a tape diagram with calculations to show her change.

$$\begin{array}{r} 11 \\ \$2.23 \\ - 0.58 \\ \hline \$1.65 \end{array}$$

$$\begin{array}{r} 11 \\ 2.23 \\ 2.23 \\ + 1.65 \\ \hline 6.11 \\ \text{total} \end{array}$$

$$\begin{array}{r} 099 \\ 10.00 \\ - 6.11 \\ \hline \end{array}$$

\$ 3.89 change

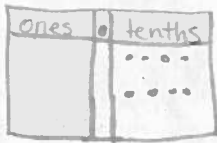


Name _____

Date _____

1. Solve by drawing disks on a place value chart. Write an equation and express the product in standard form.

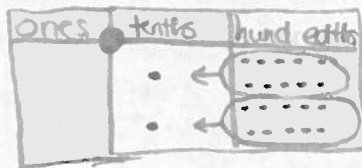
a. 2 copies of 4 tenths = 0.4×2



= 0.8

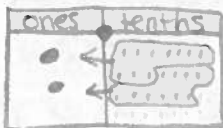
b. 4 groups of 5 hundredths

0.05×4



= 0.2

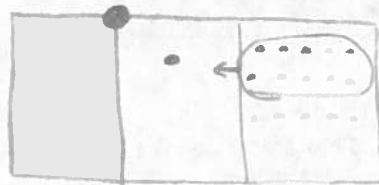
b. 4 times 7 tenths = 0.7×4



= 2.8

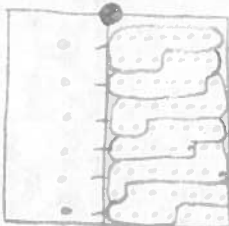
d. 3 times 5 hundredths = 0.05×3

0.05×3



= 0.15

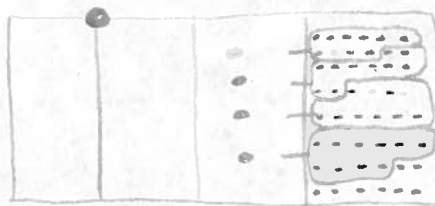
c. 9 times as much as 7 tenths = 0.7×9



= 6.3

f. 6 thousandths times 8 = 0.006×8

0.006×8



= 0.048

2. Draw a model similar to the one pictured below. Find the sum of the partial products to evaluate each expression.

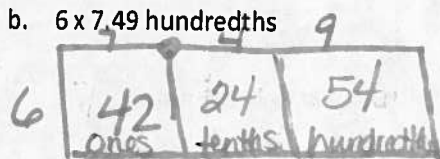
a. 4×6.79

4

	6 ones	+ 7 tenths	+ 9 hundredths
4	4 x 6 ones	4 x 7 tenths	4 x 9 hundredths

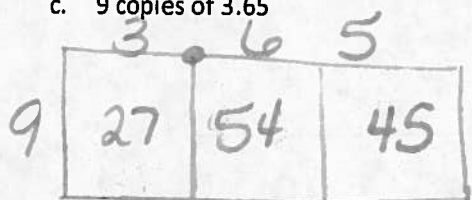
24 + 2.8 + .36 = 27.16

b. 6×7.49 hundredths



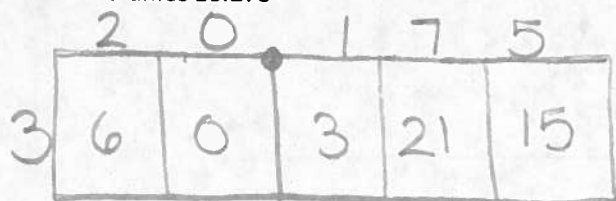
$$42 + 2.4 + .54 = 44.94$$

c. 9 copies of 3.65



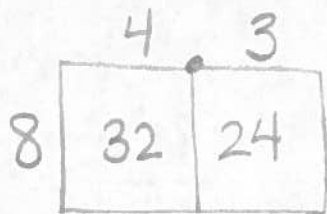
$$27 + 5.4 + .45 = 32.85$$

d. 3 times 20.175



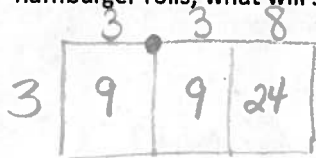
$$60 + .3 + .21 + .015 = 60.525$$

3. Leanne multiplied 8×4.3 and got 32.24. Is Leanne correct? Use an area model to explain your answer.



$$32 + 2.4 = 34.4$$

4. Anna buys groceries for her family. Hamburger meat is \$3.38 per pound, sweet potatoes are \$0.79 each, and hamburger rolls are \$2.30 a bag. If Anna buys 3 pounds of meat, 5 sweet potatoes, and one bag of hamburger rolls, what will she pay in all for the groceries?



$$9 + 0.9 + 0.24 = 10.14$$



$$3.5 + 0.45 = 3.95$$

$$\begin{array}{r} 10.14 \\ 3.95 \\ + 2.30 \\ \hline \$16.39 \end{array}$$

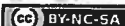


COMMON
CORE

Lesson 11:

Date:

Multiply a decimal fraction by single-digit whole numbers, relate to a written method through application of the area model and place value understanding, and explain the reasoning used.
6/28/13



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engage^{ny}

1.E.14

Name _____

Date _____

1. Choose the reasonable product for each expression. Explain your thinking in the spaces below using words, pictures, and numbers.

a. 2.1×3 0.63 6.3 63 630

$$2 \times 3$$

b. 4.27×6 2562 256.2 25.62 2.562

$$4 \times 6$$

c. 7×6.053 4237.1 423.71 42.371 4.2371

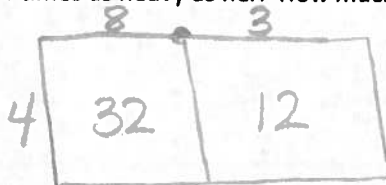
$$7 \times 6$$

d. 9×4.82 4.338 43.38 433.8 4338

$$9 \times 5$$

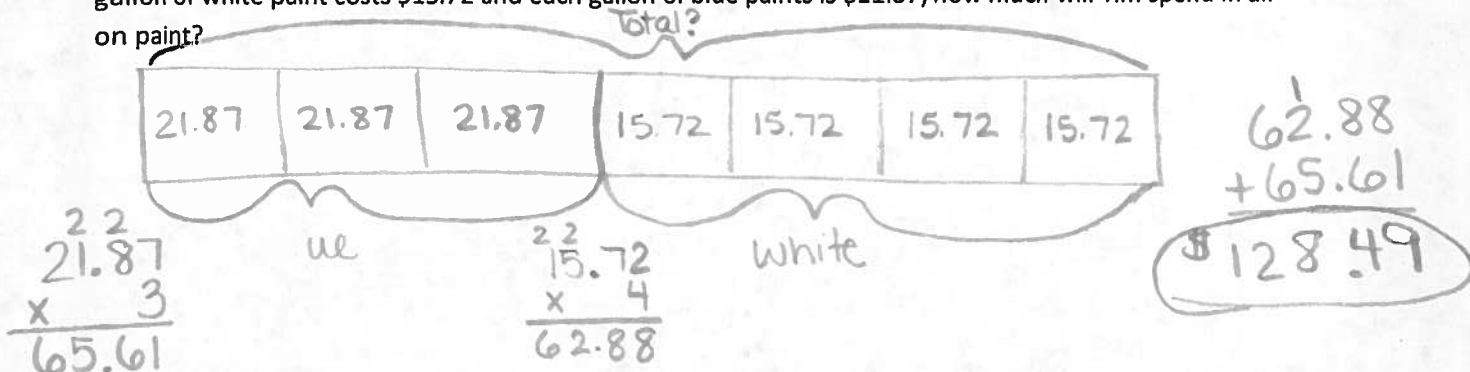
2. YiTing weighs 8.3 kg. Her older brother is 4 times as heavy as her. How much does her older brother's weight in kg?

$$\begin{array}{r} 8.3 \\ \times 4 \\ \hline 33.2 \end{array}$$

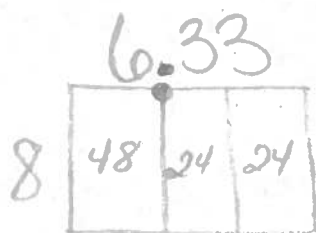
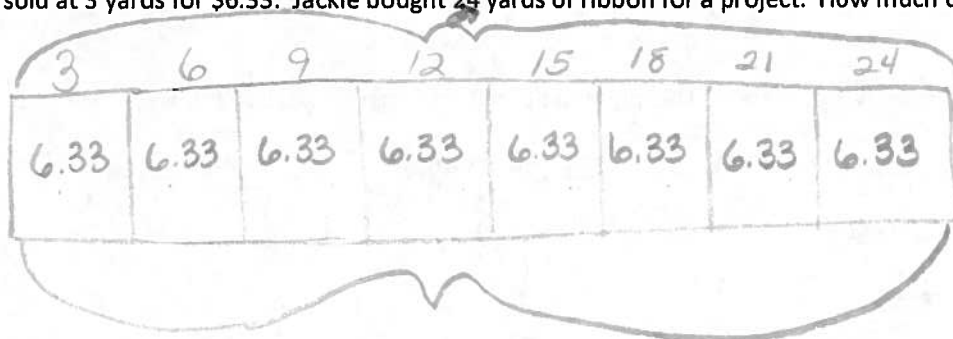


$$32 + 1.2 = 33.2$$

3. Tim is painting his storage shed. He buys 4 gallons of white paint and 3 gallons of blue paint. If each gallon of white paint costs \$15.72 and each gallon of blue paint is \$21.87, how much will Tim spend in all on paint?



4. Ribbon is sold at 3 yards for \$6.33. Jackie bought 24 yards of ribbon for a project. How much did she pay?



$$48 + 2.4 + .24 = 50.64$$

$$\begin{array}{r} 6.33 \\ \times 8 \\ \hline 50.64 \end{array}$$

Name _____ Date _____

1. Complete the sentences with the correct number of units and complete the equation.

a. 3 groups of 5 tenths is 1.5

$1.5 \div 3 = \underline{0.5}$

b. 6 groups of 4 hundredths is 0.24

$0.24 \div 6 = \underline{0.04}$

c. 5 groups of 9 thousandths is 0.045

$0.045 \div 5 = \underline{0.009}$

2. Complete the number sentence. Express the quotient in units and then in standard form.

$$\begin{aligned} \text{a. } 9.36 \div 3 &= \underline{9} \text{ ones} \div 3 + \underline{36} \text{ hundredths} \div 3 \\ &= \underline{3} \text{ ones} + \underline{12} \text{ hundredths} \\ &= \underline{3.12} \end{aligned}$$

$$\begin{aligned} \text{b. } 36.012 \div 3 &= \underline{36} \text{ ones} \div 3 + \underline{12} \text{ thousandths} \div 3 \\ &= \underline{12} \text{ ones} + \underline{4} \text{ thousandths} \\ &= \underline{12.004} \end{aligned}$$

$$\begin{aligned} \text{c. } 3.55 \div 5 &= \underline{35} \text{ tenths} \div 5 + \underline{5} \text{ hundredths} \div 5 \\ &= \underline{7} \text{ tenths} + \underline{1} \text{ hundredths} \\ &= \underline{0.71} \end{aligned}$$

d. $3.545 \div 5 =$ 35 tenths $\div 5$ + 45 thousandths $\div 5$
 $=$ 7 tenths + 9 thousandths
 $=$ 0.709

3. Find the quotients. Then use words, numbers, or pictures to describe any relationships you notice between each pair of problems and quotients.

a. $21 \div 7 =$ 3 $2.1 \div 7 =$ 0.3

b. $48 \div 8 =$ 6 $0.048 \div 8 =$ 0.006

4. Are the quotients below reasonable? Explain your answer.

a. $0.54 \div 6 = 9$ No

b. $5.4 \div 6 = 0.9$ Yes

c. $54 \div 6 = 0.09$ No

5. A toy airplane costs \$4.84. It costs 4 times as much as a toy car. What is the cost of the toy car?

$$\$4.84 \div 4 =$$

$$4 \div 4 + 0.8 \div 4 + 0.04 \div 4$$

$$1 + 0.2 + 0.01$$

$$\$1.21$$

6. Julian bought 3.9 liters of cranberry juice and Jay bought 8.74 liters of apple juice. They mixed the two juices together then poured them equally into 2 bottles. How many liters of juice are in each bottle?

$$\begin{array}{r} 8.74 \\ + 3.9 \\ \hline 12.64 \end{array}$$

$$12.64 \div 2$$

$$12 \div 2 + 0.6 \div 2 + 0.04 \div 2$$

$$6 + 0.3 + 0.02$$

$$6.32 \text{ L.}$$

Name _____

Date _____

1. Draw number disks on the place value chart to solve. Show your steps using long division.

a. $5.241 \div 3 = 1.747$

Ones	Tenths	Hundredths	Thousandths

$$\begin{array}{r}
 1.747 \\
 3 \overline{) 5.241} \\
 \underline{-3} \downarrow \\
 22 \downarrow \\
 \underline{-21} \downarrow \\
 14 \downarrow \\
 \underline{-12} \downarrow \\
 21 \downarrow \\
 \underline{-21} \\
 0
 \end{array}$$

b. $3.445 \div 5 =$ _____

Ones	Tenths	Hundredths	Thousandths

$$\begin{array}{r}
 0.689 \\
 5 \overline{) 3.445} \\
 \underline{-0} \downarrow \\
 34 \downarrow \\
 \underline{-30} \downarrow \\
 44 \downarrow \\
 \underline{-40} \downarrow \\
 45 \downarrow \\
 \underline{-45} \\
 0
 \end{array}$$

2. Solve using the standard algorithm.

<p>a. $0.64 \div 4 =$ _____</p> $\begin{array}{r} 0.16 \\ 4 \overline{) 0.64} \\ \underline{-0} \downarrow \\ 06 \\ \underline{-4} \downarrow \\ 24 \\ \underline{-24} \\ 0 \end{array}$	<p>b. $6.45 \div 5 =$ _____</p> $\begin{array}{r} 1.29 \\ 5 \overline{) 6.45} \\ \underline{-5} \downarrow \\ 14 \\ \underline{-10} \downarrow \\ 45 \\ \underline{-45} \\ 0 \end{array}$	<p>c. $16.404 \div 6 =$ _____</p> $\begin{array}{r} 2.734 \\ 6 \overline{) 16.404} \\ \underline{-0} \downarrow \\ 16 \\ \underline{-12} \downarrow \\ 44 \\ \underline{-42} \downarrow \\ 20 \\ \underline{-18} \downarrow \\ 24 \\ \underline{-24} \\ 0 \end{array}$
---	--	---

3. Mrs. Mayuko paid \$40.68 for 3 kg of shrimp. What's the cost of 1 kg of shrimp?

$$\begin{array}{r} 13.56 \\ 3 \overline{) 40.68} \\ \underline{-3} \downarrow \\ 10 \\ \underline{-9} \downarrow \\ 16 \\ \underline{-15} \downarrow \\ 18 \\ \underline{-18} \\ 0 \end{array}$$

\$ 13.56 per kg

4. The total weight of 6 pieces of butter and a bag of sugar is 3.8 lb. If the weight of the bag of sugar is 1.4 lb., what's the weight of each piece of butter?

$$\begin{array}{r} 3.8 \text{ total} \\ - 1.4 \text{ sugar} \\ \hline 2.4 \text{ butter total} \end{array}$$

$$\begin{array}{r} 0.4 \\ 6 \overline{) 2.4} \\ \underline{-0} \downarrow \\ 24 \\ \underline{-24} \\ 0 \end{array}$$



COMMON
CORE

Lesson 14:

Date:

Divide decimals with a remainder using place value understanding and relate to a written method.
6/28/13



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1.F.27

Name _____

Date _____

1. Draw number disks on the place value chart to solve, and show your steps using long division.

a. $0.7 \div 4 =$ _____

Ones	Tenths	Hundredths	Thousandths
	7	30	20
	1	7	5
	1	7	5
	1	7	5
	1	7	5

$$\begin{array}{r} 0.175 \\ 4 \overline{) 0.700} \\ \underline{-4} \\ 30 \\ \underline{-28} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

b. $8.1 \div 5 =$ _____

Ones	Tenths	Hundredths	Thousandths
8	1	10	
	30		
1	6	2	
1	6	2	
1	6	2	
1	6	2	
1	6	2	

$$\begin{array}{r} 1.62 \\ 5 \overline{) 8.10} \\ \underline{-5} \\ 31 \\ \underline{-30} \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

2. Solve using the standard algorithm.

<p>a. $0.7 \div 2 =$</p> $\begin{array}{r} 0.35 \\ 2 \overline{) 0.70} \\ \underline{-6} \\ 10 \\ \underline{-10} \\ 0 \end{array}$	<p>b. $3.9 \div 6 =$</p> $\begin{array}{r} 0.65 \\ 6 \overline{) 3.90} \\ \underline{-36} \\ 30 \\ \underline{-30} \\ 0 \end{array}$	<p>c. $9 \div 4 =$</p> $\begin{array}{r} 2.25 \\ 4 \overline{) 9.00} \\ \underline{-8} \\ 10 \\ \underline{-8} \\ 20 \\ \underline{-20} \\ 0 \end{array}$
<p>d. $0.92 \div 2 =$</p> $\begin{array}{r} 0.46 \\ 2 \overline{) 0.92} \\ \underline{-8} \\ 12 \\ \underline{-12} \\ 0 \end{array}$	<p>e. $9.4 \div 4 =$</p> $\begin{array}{r} 2.35 \\ 4 \overline{) 9.40} \\ \underline{-8} \\ 14 \\ \underline{-12} \\ 20 \\ \underline{-20} \\ 0 \end{array}$	<p>f. $91 \div 8 =$</p> $\begin{array}{r} 11.375 \\ 8 \overline{) 91.000} \\ \underline{-8} \\ 11 \\ \underline{-8} \\ 30 \\ \underline{-24} \\ 60 \\ \underline{-56} \\ 40 \\ \underline{-40} \\ 0 \end{array}$

3. A rope 8.7 m long is cut into 5 equal pieces. How long is each piece?

$$\begin{array}{r} 1.74 \\ 5 \overline{) 8.70} \\ \underline{-5} \\ 37 \\ \underline{-35} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$

4. Yasmine bought 6 gallons of apple juice. After filling up 4 bottles of the same size with apple juice, she had 0.3 gallon of apple juice left. What's the amount of apple juice in each bottle?

$$\begin{array}{r} 6.0 \text{ total} \\ - 0.3 \text{ left} \\ \hline 5.7 \text{ divided by 4} \end{array}$$

$$\begin{array}{r} 1.425 \text{ gallons} \\ 4 \overline{) 5.700} \\ \underline{-4} \\ 17 \\ \underline{-16} \\ 10 \\ \underline{-8} \\ 20 \\ \underline{-20} \\ 0 \end{array}$$



COMMON
CORE

Lesson 15:

Date:

Divide decimals using place value understanding, including remainders in the smallest unit.
6/28/13

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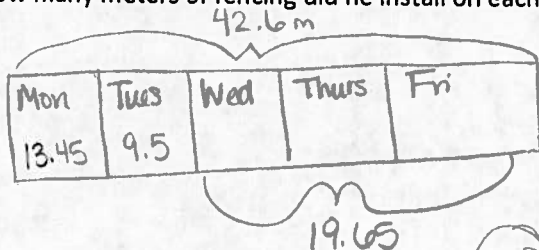
1.F.40

Name _____

Date _____

Solve using tape diagrams.

1. A gardener installed 42.6 meters of fencing in a week. He installed 13.45 meters on Monday and 9.5 meters on Tuesday. He installed the rest of the fence in equal lengths on Wednesday through Friday. How many meters of fencing did he install on each of the last three days?



$$\begin{array}{r} 3115 \\ 42.60 \\ -22.95 \\ \hline 19.65 \end{array}$$

$$\begin{array}{r} 13.45 \\ +9.5 \\ \hline 22.95 \end{array}$$

2. Jenny charges \$9.15 an hour to babysit toddlers and \$7.45 an hour to babysit school-aged children.

- a. If Jenny babysat toddlers for 9 hours and school-aged children for 6 hours, how much money did she earn in all?

$$\begin{array}{r} 9.15 \\ \times 9 \\ \hline 82.35 \end{array}$$

$$\begin{array}{r} 7.45 \\ \times 6 \\ \hline 44.70 \end{array}$$

$$\begin{array}{r} 82.35 \\ +44.70 \\ \hline 127.05 \end{array}$$

- b. Jenny wants to earn \$130 by the end of the summer. How much more will she need to earn to meet her goal?

$$\begin{array}{r} 129.90 \\ -95.05 \\ \hline 34.85 \end{array}$$

3. A table and 8 chairs weigh 235.68 pounds together. If the table weighs 157.84 lbs., what is the weight of one chair in pounds?

$$\begin{array}{r} 1\overline{)235.68} \\ -157.84 \\ \hline 77.84 \text{ lbs.} \end{array}$$

4. Mrs. Cleaver mixes 1.24 liters of red paint with 3 times as much blue paint to make purple paint. She pours the paint equally into 5 containers. How much blue paint is in each cup? Give you answer in liters.

$$\begin{array}{r} 1.24 \text{ red} \\ \times 3 \\ \hline 3.72 \text{ blue} \end{array}$$

$$\begin{array}{r} 0.744 \text{ liters} \\ 5 \overline{)3.720} \\ \underline{-35} \downarrow \\ 22 \downarrow \\ \underline{-20} \downarrow \\ 20 \downarrow \\ \underline{-20} \\ 0 \end{array}$$