Illustrative Mathematics

5.NBT Drawing Pictures to Illustrate Decimal Comparisons

Task

a. Which is greater, 0.11 or 0.01? Explain. Draw a picture to illustrate your explanation.

b. Which is greater, 0.03 or 0.07? Explain. Draw a picture to illustrate your explanation.

c. Which is greater, 0.25 or 0.52? Explain. Draw a picture to illustrate your explanation.

d. Which is greater, 0.13 or 0.031? Explain. Draw a picture to illustrate your explanation.
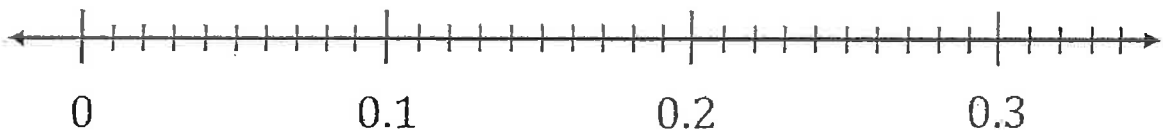
5.NBT Comparing Decimals on the Number Line

Task

a. Which is greater, 0.1 or 0.01? Show the comparison on the number line.

0   0.1   0.2   0.3

b. Which is greater, 0.2 or 0.03? Show the comparison on the number line.

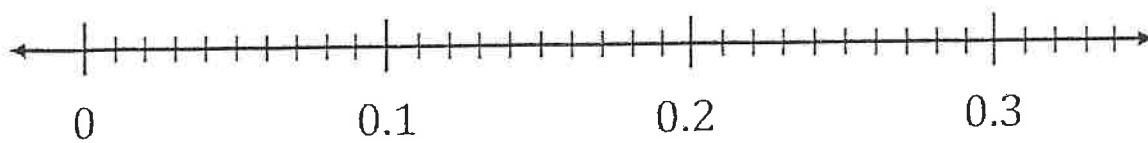0   0.1   0.2   0.3

c. Which is greater, 0.12 or 0.21? Show the comparison on the number line.

0   0.1   0.2   0.3

d. Which is greater, 0.13 or 0.031? Show the comparison on the number line.

0   0.1   0.2   0.3

5.NBT Placing Thousandths on the Number Line.

Task

Label all of the tick marks on the number line.

0   0.1

Plot and label each of the following numbers on the number line.

$$0.100$$
$$0.010$$
$$0.072$$
$$0.038$$

Which of these numbers is greatest? Which is least? How can you tell by looking at the number line?

E

5.NBT Are these equivalent to 9.52?

Task

Isaiah is thinking of the number 9.52 in his head. Decide whether each of these has the same value as 9.52 and discuss your reasoning.

a. Nine and fifty-two tenths

b. 9 + 0.5 + 0.02

c. 9 ones + 5 tenths + 2 hundredths

d. $(9 \times 1) + \left(5 \times \dfrac{1}{10}\right) + \left(2 \times \dfrac{1}{100}\right)$
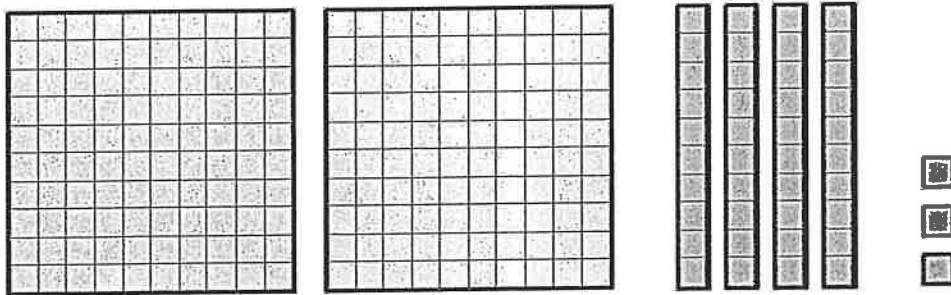
e. 952 tenths

f. 952 hundredths

5.NBT Which number is it?

Task

Netta drew a picture on graph paper:

She said,

> *In my picture, a big square represents 1. Since ten rectangles make a big square, a rectangle represents 0.1. Since 100 little squares make a big square, a little square represents 0.01. So this picture represents 2.43.*

a. Is Netta Correct?

Manny said,

> *I drew the same picture, but in my picture, a little square represents 1, so this picture represents 243.*

b. Name some other numbers that this picture could represent. For each of these numbers, what does a little square represent? What does a rectangle represent? What

does a big square represent? Explain.

c. Draw a picture to represent 0.047.

.ame:_____

P/S	R/P	Com	Con	Rep	A/Level

Bamboo and the Botanist C

Bamboo and the Botanist

A botanist is a person who studies plants. Mr. Moss is a botanist who is studying a type of bamboo that can grow 1.2 to 3.9 inches every twenty-four hours. Mr. Moss has two pots with a stem of bamboo in each pot. Each stem of bamboo is four feet in height. Mr. Moss wants to measure the height of each stem every twenty-four hours for a week as accurately as he can. Mr. Moss records the growth of each stem. Mr. Moss lists his data:

Stem in pot one—2.878 inches on day one, 1.623 inches on day two, 2.999 inches on day three, 3.319 inches on day four, 1.537 inches on day five, 3.745 inches on day six, 2.153 inches on day seven. Stem in pot two—1.585 inches on day one, 2.307 inches on day two, 1.296 inches on day three, 4.121 inches on day four, 1.742 inches on day five, 2.418 inches on day six, 3.639 inches on day seven.

`Ir. Moss organizes his bamboo growth data and then uses the greater than, less than, .qual symbols to make four observations. Show how Mr. Moss could represent his data. What four observations could Mr. Moss make about his data using the greater than, less than, equal symbols? Show all your mathematical thinking.

Place Value Chart with Decimal Place Values

hundred thousands	ten thousands	thousands	hundreds	tens	ones	.	tenths	hundredths	thousandths	ten-thousandths	hundred-thousandths
100,000	10,000	1,000	100	10	1	.	0.1	0.01	0.001	0.0001	0.00001
10^5	10^4	10^3	10^2	10^1	10^0		$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$	$\frac{1}{10000}$	$\frac{1}{100000}$

Decimals – are fractions whose denominators are 10 or a power of 10.

"THS" – means to the right of the decimal point

The value of each place is 10 times the place to its right.

The value of each place is $\frac{1}{10}$ of the place to the left.

Ex. Thousands – a thousand is 10 times one hundred.

Ex. Thousands – a thousand is $\frac{1}{10}$ of ten thousand.

Decimal Review

1. Define a decimal.

2. List 6 different uses of decimals in everyday life.

3. What is the relationship of the place values as you move one spot to the left on the place value chart?

4. What is the relationship of the place values as you move one spot to the right on the place value chart?

5. What does the THS mean?

Fractions and Decimals

Write the following decimals as fractions.

1. .008

2. 6.43

3. 3.0074

4. .00005

5. 2.098

6. 12.7

7. 23.01245

8. 1.125

9. 7.98

10. 9.0345

11. Create a decimal that extends through the ten-thousandths place.

12. Create a decimal that extends through the hundredths place.

13. Create a decimal that extends through the hundred-thousandths place.

14. Create a decimal that extends through the thousandths place.

Write the following fractions as decimals.

1. $\dfrac{8}{10}$

2. $\dfrac{34}{10000}$

3. $\dfrac{27}{1000}$

4. $\dfrac{8356}{100000}$

5. $\dfrac{2}{100}$
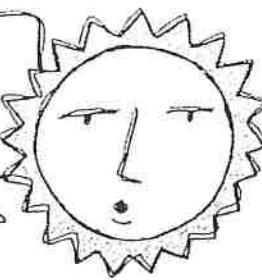
6. $\dfrac{217}{10000}$

7. $\dfrac{5}{10}$

8. $\dfrac{3125}{100000}$

9. $\dfrac{3}{1000}$

10. $\dfrac{496}{10000}$

Name: _____

Tenths and Hundredths

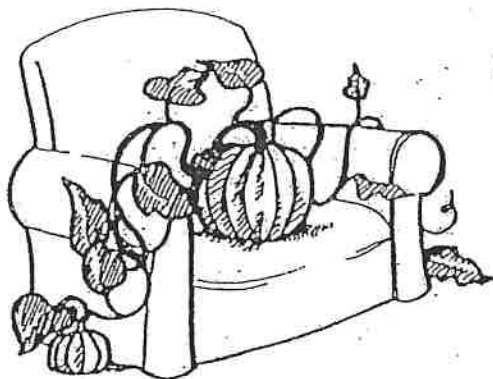|	decimal number	word name	fraction or mixed number
a.	1.4	one and four tenths	
b.		five and fifteen hundredths	$5 \dfrac{15}{100}$
c.	0.9		
d.		nine hundredths	
e.			$3 \dfrac{74}{100}$
f.	6.4		
g.		eight and eight hundredths	
h.			$\dfrac{2}{10}$
i.	11.19		
j.		one and six tenths	

Name _____

Corner Match-Ups

To complete each shape, write the fractions, decimals, and percents that are equivalent to each fraction. The choices are in the circles below.

$\frac{1}{20}$ $\frac{4}{25}$ $\frac{4}{5}$ $\frac{7}{10}$

$\frac{1}{2}$ $\frac{1}{4}$

(0.05) (70%) (0.8) (50%) (0.16) (25%) ($\frac{5}{100}$) ($\frac{25}{100}$) (16%)

($\frac{70}{100}$) (0.5) (80%) (5%) ($\frac{5}{10}$) ($\frac{8}{10}$) (0.7) ($\frac{16}{100}$) (0.25)
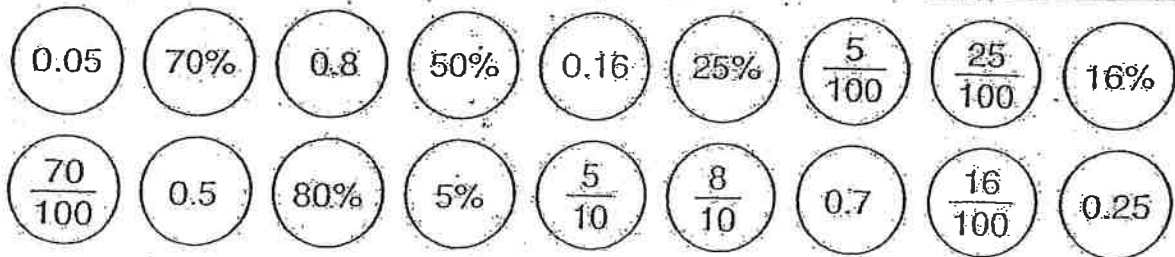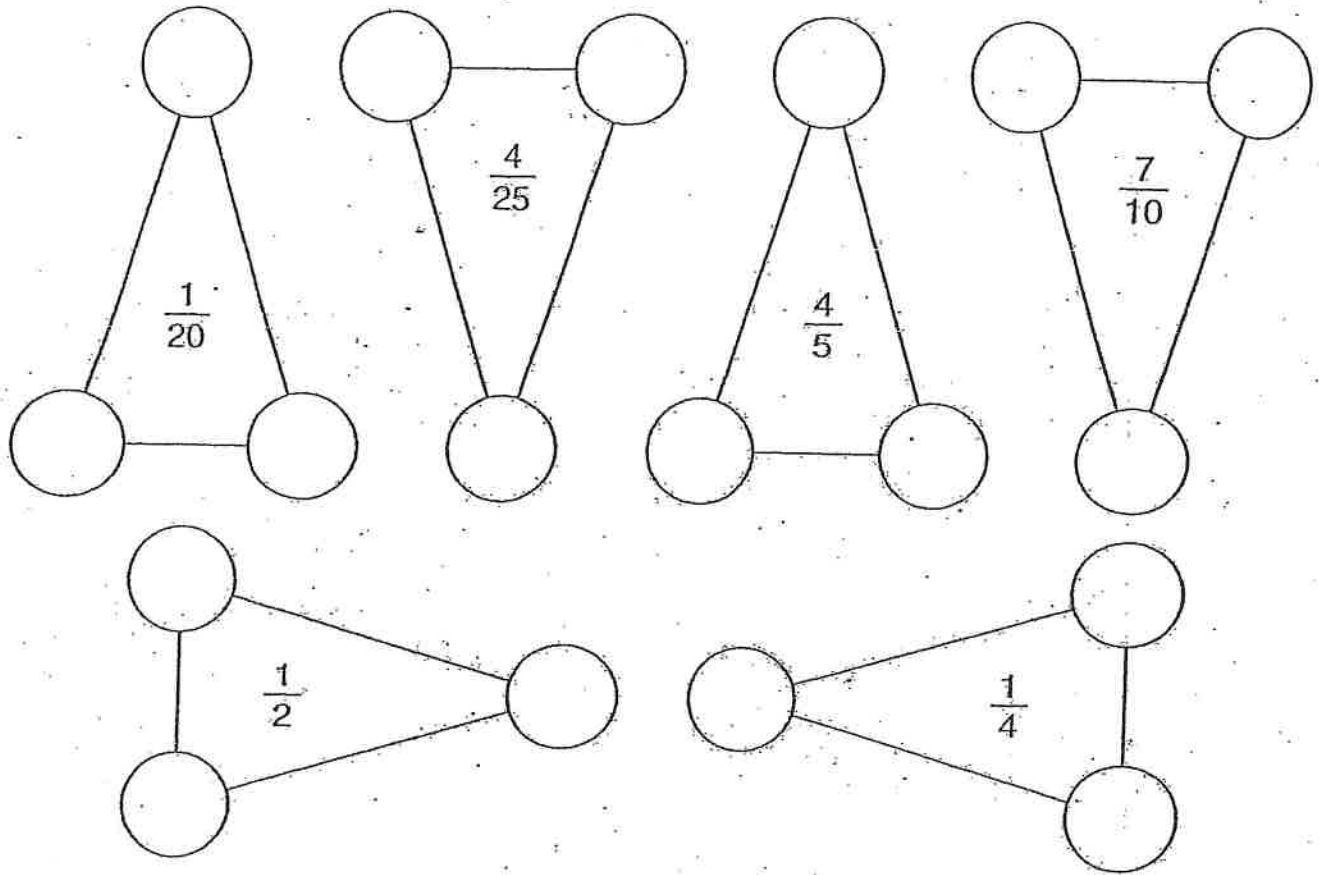
Can 0.8 be expressed as 8%? Why or why not?

_____

_____

Name_____

Cross-Out

Cross out the box in each row that does not belong. The letters in those boxes, when written in order, will answer the following question:

What did the farmer raise in the family room?

	S	T	U	V	W
1.	50%	$\frac{55}{100}$	$\frac{1}{2}$	0.5	
	F	G	H	I	J
2.	25%	$\frac{25}{100}$	$\frac{1}{5}$	0.25	
	B	C	D	E	F
3.	30%	$\frac{30}{100}$	$\frac{3}{10}$	0.33	
	V	W	X	Y	Z
4.	15%	$\frac{5}{100}$	$\frac{3}{20}$	0.15	
	E	F	G	H	I
5.	12.5%	$\frac{125}{1000}$	$\frac{1}{8}$	0.125	
	M	N	O	P	Q
6.	60%	$\frac{6}{100}$	$\frac{3}{5}$	0.6	
	B	C	D	E	F
7.	80%	$\frac{80}{100}$	$\frac{3}{8}$	0.8	
	K	L	M	N	O
8.	5%	$\frac{5}{100}$	$\frac{1}{20}$	0.05	
	W	X	Y	Z	A
9.	75%	$\frac{85}{100}$	$\frac{17}{20}$	0.85	

```
__1____2____3____    __4____5____6____7____8____9___
```

Fractions, decimals, percents

Creating Equivalent Fractions/Decimals Using Powers of 10

Create 3 equivalent decimals for $\frac{8}{100}$

- First, write this number in decimal form
- Next, add one or more zeroes to the end to create equivalent decimals
- How do you know they are equivalent to $\frac{8}{100}$? Because the zeroes you have added would all "roll down the hill" (they are insignificant)

So, $\frac{8}{100}$ is equivalent to: 0.08, 0.080, 0.0800, 0.08000, etc...

Create 3 equivalent decimals for $\frac{200}{1000}$ (hint: you can add zeroes (multiply), or in this case, you could dance zeroes (divide) as well).

_____ _____ _____

Create 3 equivalent fractions for 0.040

- First, write this decimal in fraction form
- Next, dance or add zeroes to create equivalent fractions

So, 0.040 is equivalent to $\frac{40}{1000}$, $\frac{400}{10000}$, $\frac{4}{100}$, etc...

Create 3 equivalent fractions for 0.080

_____ _____ _____

Rounding

Round to the nearest TENTHS

9.63 = _____

.8478 = _____

3.8524 = _____

.6839 = _____

3.972 = _____

5.092 = _____

2.546 = _____

.95 = _____

.647 = _____

5.8374 = _____

.231 = _____

2.8023 = _____

Round to the nearest HUNDREDTHS

1.353 = _____

.5723 = _____

.426789 = _____

3.957 = _____

.4937 = _____

4.3819 = _____

8.438 = _____

.3725 = _____

2.8765 = _____

1.4626 = _____

2.2837 = _____

6.9632 = _____

Round to the nearest THOUSANDTHS

.2891 = _____

4.9832 = _____

2.39876 = _____

1.384 = _____

.38996 = _____

9.18175 = _____

8.3840 = _____

.4739 = _____

.28456 = _____

3.4821 = _____

.2745 = _____

5.1083 = _____

Round to the nearest TEN-THOUSANDTHS

.279133 = _____

14.98326 = _____

1.39816 = _____

13.98498 = _____

.38996 = _____

19.281742 = _____

6.38423 = _____

.1739 = _____

.284561 = _____

3.482179 = _____

.274537 = _____

15.108 = _____

Round to the nearest HUNDRED-THOUSANDTHS

.486138 = _____

22.983265 = _____

11.598267 = _____

23.984989 = _____

.389968 = _____

22.281742 = _____

8.28461 = _____

.173912 = _____

.278999 = _____

6.582197 = _____

.214537 = _____

15.10864 = _____

Name: _____

Rounding to The Nearest Tenth and Hundredth

1. Peter traveled 15.789 kilometers in his car.
   Round this number to the nearest hundredth
   of a kilometer.   _____

2. If you find the number 6.26 on a number line,
   it would be located between...

   a. 6.05 and 6.07   **b.** 6.02 and 6.03
   c. 6.26 and 6.27   **d.** 6.2 and 6.3

3. Jimena used her calculator to divide 2 by 13.
   The calculator screen shows the number: 0.1538461.
   Round Jimena's answer to the nearest tenth.   _____

4. The number *pi* is approximately equal to 3.14159265359.

   Round *pi* to the nearest hundredth.   _____

   Round *pi* to the nearest tenth.   _____

   Round *pi* to the nearest whole number.   _____

5. Write the number *two-thirds* as a decimal rounded
   to the nearest tenth.   _____

6. Write the number *seven and one-third* as a decimal
   rounded to the nearest hundredth.   _____

7. A stack of 7 nickels is 13.65 mm high. What is the
   height of the stack to the nearest tenth of a millimeter? _____

Rounding on a Number Line

The number 5.267 is being rounded to the nearest hundredth. Between what two hundredths does 5.267 lie? Place those numbers in the boxes under the number line. Place a point on the number line to show 5.267.
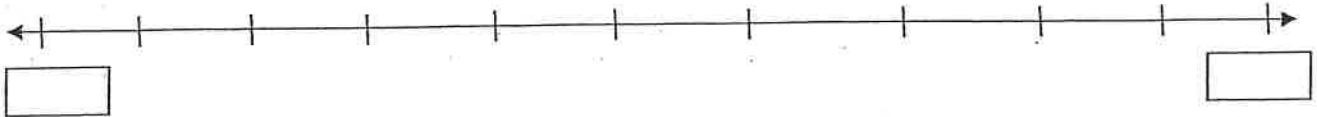
How do you know your answer is correct?

_____

_____

_____

The number 2.634 is being rounded to the nearest hundredth. Between what two hundredths does 2.634 lie? Place those numbers in the boxes under the number line. Place a point on the number line to show 2.634.

How do you know your answer is correct?

_____

_____

_____

Name _____ Estimating Decimal Sums and Differences

See You Around

Estimate each sum or difference. Round each number to the greatest place. Find and shade your answers in the sections below to see which value our number system is based upon.

1. $\begin{array}{r} 5.7 \\ + 7.2 \\ \hline 13.0 \end{array}$ $\begin{array}{r} 4.2 \\ + 8.3 \\ \hline \end{array}$ $\begin{array}{r} 8.6 \\ - 1.7 \\ \hline \end{array}$ $\begin{array}{r} 7.61 \\ + 2.17 \\ \hline \end{array}$ $\begin{array}{r} 19.05 \\ + 3.57 \\ \hline \end{array}$ $\begin{array}{r} 32.0 \\ - 14.9 \\ \hline \end{array}$

2. $\begin{array}{r} 8.34 \\ - 4.66 \\ \hline \end{array}$ $\begin{array}{r} 19.7 \\ - 1.4 \\ \hline \end{array}$ $\begin{array}{r} 15.27 \\ - 6.37 \\ \hline \end{array}$ $\begin{array}{r} 20.15 \\ + 19.87 \\ \hline \end{array}$ $\begin{array}{r} 30.46 \\ + 38.46 \\ \hline \end{array}$ $\begin{array}{r} 9.257 \\ - 6.842 \\ \hline \end{array}$

3. $\begin{array}{r} 8.89 \\ - 7.95 \\ \hline \end{array}$ $\begin{array}{r} 91.78 \\ - 4.28 \\ \hline \end{array}$ $\begin{array}{r} 0.295 \\ - 0.187 \\ \hline \end{array}$ $\begin{array}{r} 0.53 \\ + 0.67 \\ \hline \end{array}$ $\begin{array}{r} 0.94 \\ + 0.89 \\ \hline \end{array}$ $\begin{array}{r} 0.62 \\ - 0.17 \\ \hline \end{array}$

4. $\begin{array}{r} 5.13 \\ + 2.98 \\ \hline \end{array}$ $\begin{array}{r} 0.894 \\ + 0.183 \\ \hline \end{array}$ $\begin{array}{r} 8.456 \\ + 9.321 \\ \hline \end{array}$ $\begin{array}{r} 0.416 \\ + 0.219 \\ \hline \end{array}$ $\begin{array}{r} 11.75 \\ - 0.81 \\ \hline \end{array}$ $\begin{array}{r} 30.87 \\ - 28.46 \\ \hline \end{array}$

4	5	13	90	2.4	19	1.2	0.7	40	0.9
1.4	10	8	29	0.8	2	84	1.3	7	1.7
0.2	4.2	0.6	100	7.8	23	16	7.8	0	80
50	9.2	20	15	6	0.1	1.1	4.6	1.8	0.3
28	0.5	86	1.9	53	70	60	1.5	3	30
1.6	■	9	11	5.1	12	0.4	17	1	14

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Adding/Subtracting Decimals

Add or Subtract.

1. $6 + .09856 + 2.1 =$

2. $56.1 - 2.0098 =$

3. $.23 + .0067 + 9 + 1.7233 =$

4. $.9 + 8.1 + 82 + .00784 =$

5. $78 - .00032 =$

6. $3.6217 + 205 + .04583 =$

7. $24.7 - 13.7083 =$

8. $176.2075 - 57.9 =$

9. $.8107 + 2.0053 + 7.34 =$

10. $9.54 + 2.3 + .00745 =$

Add or Subtract.

1. $12 + .049376 + 37.9 =$

2. $84.2 - 8.0173 =$

3. $.00842 + 12 + 1.9 + .40348 =$

4. $.6 + 9.2 + 91 + .01046 =$

5. $32 - .00081 =$

6. $19.62341 + 18 + .03689 =$

7. $75.2 - 16.7243 =$

8. $184.2092 - 43.8 =$
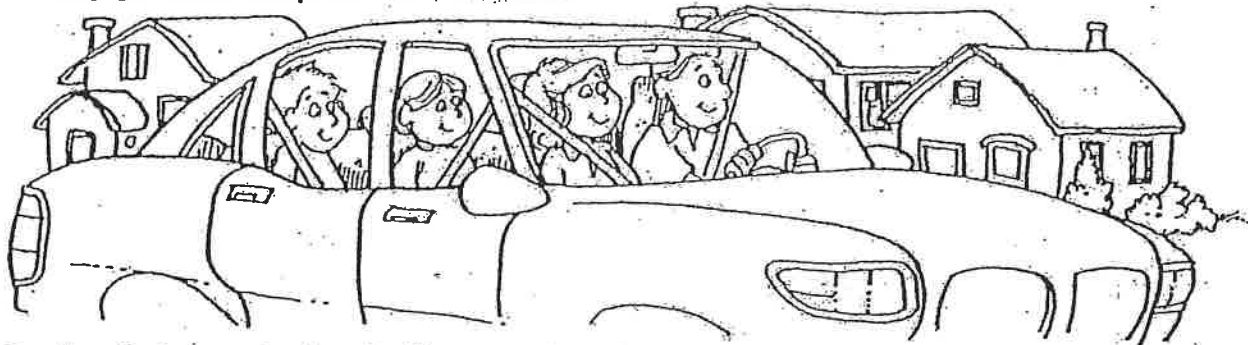
9. $.1924 + 6.0036 + 8.23 =$

10. $7.68 + 2.3 + .00317 =$

Name _____

A Family Vacation

The Maleski family is going to visit relatives on their vacation. As they drive, Lula and Vasel write down how far they go. Read the problems and solve.

A On the first day, the family drove 50.25 miles before breakfast. After they ate, the family drove another 45.36 miles to Aunt Marine's house. How far did they drive on the first day?

$$\begin{array}{r} 50.25 \\ + 45.36 \\ \hline 95.61 \text{ miles} \end{array}$$

B On the second day, they drove 29.76 miles before stopping to get gas. Then they drove 71.37 miles to Grandma Maleski's house. How far did they drive on the second day?

_____

C On the third day, the family left Grandma's house. They drove 96.99 miles in the morning and 62.82 miles in the afternoon. How many more miles did they drive in the morning than in the afternoon?

_____

D After dinner, they drove 15.84 miles before stopping at a rest stop. Then they drove another 9.216 miles to Nana's house. How far did they travel after dinner?

_____

E The Maleski family wanted to drive to the amusement park, which was 28.7 miles from Nana's house, or to the animal park, which was 32.4 miles from Nana's house. How many miles farther is the animal park than the amusement park from Nana's house?

_____

F The next day, they left Nana's house and drove 85.843 miles before stopping for lunch. After lunch, they drove 65.09 miles to Uncle Alex's house. How many more miles did they drive before lunch than after lunch?

_____

G The next day, they drove 20.10 miles to the zoo and then they drove 12.86 miles to the museum. How far did they drive on this day?

_____

Multiplying Decimals Through Hundredths

━━━━━━━━━━━━━━━━━━━━━━━━━━ SKILLS ━━━━━━━━━━━━━━━━━━━━━━━━━━

1. Multiply 1.3 times 0.9.

> **Multiplying Decimals**
> 1. Write the problem vertically.
> 2. Multiply as you would multiply whole numbers.
> 3. Use the total number of decimal places in the factors to place the decimal point in the product.

2. Multiply 2.4 times 0.6.　　**3.** Multiply 0.9 times 0.5.　　**4.** Multiply 3.3 times 0.5.

5. Multiply 7.63 times 0.5.　　**6.** Multiply 4.05 times 0.9.　　**7.** Multiply 0.71 times 0.4.

Find each product.

8.　3.6 × 1.4	**9.**　8.5 × 7.9	**10.**　1.2 × 1.2	**11.**　2.37 × 3.3
12.　7.37 × 0.2	**13.**　1.05 × 0.9	**14.**　3.07 × 6.2	**15.**　0.5 × 0.4
16.　0.54 × 0.7	**17.**　0.82 × 2.8	**18.**　0.04 × 3.6	**19.**　7.05 × 0.8

LIM-18-03

Name_____   Date_____

Multiplying Decimals and Significant Digits

1)   0.5 x 0.4_____   2)   0.6 x 0.5_____

3)   0.5 x 0.8_____   4).   0.5 x 0.04_____

5)   0.05 x 0.6_____   6)   8 x 0.10_____

7)   0.01 x 0.2_____   8)   0.2 x 0.15_____

9) 0.9 x 0.09 _____

10) 0.10 x 0.10 _____

11) 0.02 x 0.20 _____

12) 2.1 x 0.05 _____

13) 5.5 x 0.01 _____

14) 0.03 x 0.5 _____

15) .07 x 1.07 _____

16) 0.2 x 0.15 _____

$$
\begin{array}{r}
2.4 \\
\times\ 15 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.24 \\
\times\ 15 \\
\hline
\end{array}
\qquad
\begin{array}{r}
2.4 \\
\times\ 1.5 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.24 \\
\times\ .15 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
3.5 \\
\times\ .3 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.35 \\
\times\ .3 \\
\hline
\end{array}
\qquad
\begin{array}{r}
3.5 \\
\times\ .03 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.35 \\
\times\ .05 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
.8 \\
\times\ .6 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.05 \\
\times\ .6 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.07 \\
\times\ .03 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.82 \\
\times\ .9 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
.45 \\
\times\ .4 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.63 \\
\times\ .5 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.52 \\
\times\ .24 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.29 \\
\times\ .12 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
.34 \\
\times\ .52 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.008 \\
\times\ 5 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.004 \\
\times\ .6 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.035 \\
\times\ .04 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
.6 \\
\times\ .005 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.05 \\
\times\ .009 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.46 \\
\times\ .36 \\
\hline
\end{array}
\qquad
\begin{array}{r}
.72 \\
\times\ .36 \\
\hline
\end{array}
$$

```
   5.4          5.9          .25          .68
x  .05       x  .07       x  .04       x  .14


  .429         .693         .901         .036
x  .4        x  .7        x  .15       x  .33


 15.6         36.8        103.4        156.4
x  .6        x  .55       x  .87       x  .52


 .125        1.467        34.56         .891
x 60         x 3.4        x 4.8        x 7.7


 34.56        1.459        89.4         1.592
x 12.1       x  .05       x  .004      x  .011


 89.03        105.3        1678         .444
x  .07       x 10.4       x  .45       x 1.2
```

Multiplying Decimals with Zeros in the Product

━━━━━━━━━━━━━━━━━━━ SKILLS ━━━━━━━━━━━━━━━━━━━

Use mental math to solve each multiplication problem.

1. Multiply 0.06 × 0.04.

2. Multiply 0.09 × 0.6.

3. Multiply 0.3 × 0.06.

4. Multiply 0.12 × 0.2.

5. Multiply 0.08 × 0.7.

6. Multiply 0.04 × 0.09.

Find each product.

7.	8.	9.	10.	11.
0.13 × 0.06	0.21 × 0.06	2.41 × 0.03	0.96 × 0.04	0.16 × 0.09

12.	13.	14.	15.	16.
0.31 × 0.08	0.09 × 0.09	1.03 × 0.06	1.3 × 0.06	0.32 × 0.04

17. Which pair of factors has a product greater than 4 but less than 6?

a. 3.5 and 1.6
b. 4 and 1.9
c. 1.8 and 1.4

18. Which pair of factors has a product greater than 1 but less than 2?

a. 1.4 and 1.9
b. 1.1 and 1.6
c. 0.99 and 3

19. Which pair of factors has a product greater than 7 but less than 9?

a. 6 and 1.5
b. 4 and 2.4
c. 5.1 and 1.5

20. Which pair of factors has a product greater than 8 but less than 10?

a. 2.9 and 4.5
b. 5 and 2.5
c. 2.1 and 4.2

21. Which pair of factors has a product greater than 3 but less than 5?

a. 1.6 and 2.6
b. 2.4 and 2.2
c. 3.4 and 1.7

22. Which pair of factors has a product greater than 5 but less than 7?

a. 2.7 and 3.1
b. 2.2 and 2.6
c. 2.1 and 2.2

Grade 5

Name _____

Multiplying Decimals

Date _____

Find each product.

1) 4.6×1.7

2) 3.1×4.4

3) 2.5×0.1

4) 2.4×3.2

5) 2.66×5.5

6) 10.4×14.7

7) 0.8×15.9

8) 19.9×4

9) 5.341×6.9

10) 4.33×13.3

11) 5.95 × 9.4

  A) 15.35   B) 55.93

  C) 52.83   D) 63.73

12) 2.96 × 1.2

  A) 9.852   B) 7.052

  C) 4.052   D) 3.552

13) 9.95 × 6.2

  A) 68.29   B) 66.09

  C) 7.56   D) 61.69

14) 4.03 × 6.24

  A) 25.1472   B) 15.9572

  C) 10.27   D) 15.3472

15) 150.36 x 5

16) 12.4 x 3.24

17) 151.25 x 2.4

18) 920.33 x 11.3

19) 125.36 x 67.4

20) 231.75 x 654.20

Name_____

5.NBT.7

Divide **3.25 ÷ 5**

Step 1
Place the decimal point in the quotient directly above the decimal point in the dividend.

$$5\overline{)3.25}$$

Remember:
The **dividend** is 3.25 because it is the number that is to be divided.

Step 2
Then, divide as you would whole numbers.

$$\begin{array}{r} 0.65 \\ 5\overline{)3.25} \\ -30 \\ \hline 25 \\ -25 \\ \hline 0 \end{array}$$

Step 3
Check by multiplying.

$$5\overline{)3.25}^{\,0.65}$$

$$\begin{array}{r} 0.65 \\ \times\ \ 5 \\ \hline 3.25 \end{array}$$

Divide. Use multiplication to check your work.

1. $8\overline{)24}$

2. $8\overline{)0.24}$

3. $3\overline{)0.69}$

4. $3\overline{)0.069}$

5. $2\overline{)45.4}$

6. $2\overline{)4.54}$

7. $7\overline{)\$34.37}$

8. $5\overline{)0.15}$

9. $6\overline{)120.6}$

10. $6\overline{)12.06}$

11. $4\overline{)2.44}$

12. $6\overline{)\$2.76}$

13. $6\overline{)5.88}$

14. $4\overline{)7.36}$

15. $8\overline{)7.52}$

16. $8\overline{)\$10.40}$

17. $6\overline{)0.63}$

18. $8\overline{)68.28}$

19. $5\overline{)\$543.20}$

20. $7\overline{)0.28}$

☐ I can divide decimals to the hundredths place.

Name _____

Finding Decimal Quotients

─────────────── SKILLS ───────────────

Find each quotient.

1. $5\overline{)7}$ 2. $4\overline{)1}$ 3. $2\overline{)9}$ 4. $6\overline{)15}$ 5. $30\overline{)27}$

6. $12\overline{)81}$ 7. $15\overline{)36}$ 8. $5\overline{)56}$ 9. $14\overline{)49}$ 10. $6\overline{)33}$

11. $4\overline{)27}$ 12. $16\overline{)46}$ 13. $8\overline{)65}$ 14. $8\overline{)23}$ 15. $20\overline{)48}$

16. Find the quotient of 152 and 5.

    $5\overline{)152}$

17. Which expression could be used to check your answer to question 16?

    a. 152×5
    b. 3.4×5
    c. 30.4×5
    d. 3.4×152

18. Divide 93 by 6.

    $6\overline{)93}$

19. Which expression could be used to check your answer to question 18?

    a. 155×6
    b. 15×6
    c. 93×6
    d. 6×15.5

Name_____

Divide **2.5 ÷ 4**

Step 1	Step 2	Step 3
Divide the tenths.	Write a 0 in the hundredths place.	Write a 0 in the thousandths place. Bring down and divide.

Step 1
Divide the tenths.

$$\begin{array}{r} 0.6 \\ 4\overline{)2.5} \\ -24 \\ \hline 1 \end{array}$$

Step 2
Write a 0 in the hundredths place.

$$\begin{array}{r} 0.62 \\ 4\overline{)2.50} \\ -24 \\ \hline 10 \\ -8 \\ \hline 2 \end{array}$$ ← Write a 0 here.

← Write a 0 here.
Divide by 4.

Step 3
Write a 0 in the thousandths place. Bring down and divide.

$$\begin{array}{r} 0.625 \\ 4\overline{)2.500} \\ -24 \\ \hline 10 \\ -8 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$
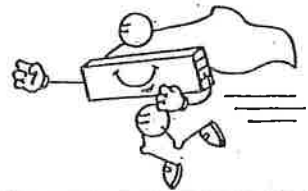
Divide. Use multiplication to check your work.

1. $5\overline{)2.7}$

2. $4\overline{)4.6}$

3. $6\overline{)5.7}$

4. $4\overline{)7.3}$

5. $8\overline{)2.5}$

6. $4\overline{)0.31}$

7. $5\overline{)8.1}$

8. $4\overline{)6.3}$

9. $5\overline{)0.73}$

10. $4\overline{)4.2}$

11. $5\overline{)4.19}$

12. $5\overline{)3.74}$

13. $4\overline{)53.4}$

14. $2\overline{)0.13}$

15. $5\overline{)75.02}$

16. $18\overline{)9.63}$

17. $40\overline{)53.6}$

18. $16\overline{)5.2}$

19. $32\overline{)6.8}$

20. $56\overline{)9.8}$

☐ I can divide decimals and justify my answer using multiplication.

Name_____

`5.NBT.7`

To divide by a decimal number, you must move the decimal to make the divisor a whole number. To make the divisor a whole number, multiply both the divisor and dividend by 10, 100, or 1,000.

Example: $0.08)\overline{6.081}$ = $8)\overline{608.1}$

Divide **5.44 ÷ 1.6**

Step 1
Move the decimal point one place to the right to make the divisor a whole number.

$1.6)\overline{5.44}$ ←— Multiply by 10.

Step 2
Place the decimal point in the quotient. Divide as you would with whole numbers.

```
      3.4
16)54.4
  -48
    64
   -64
     0
```

Divide. Use multiplication to check your work.

1. $0.6)\overline{5.4}$

2. $0.9)\overline{0.18}$

3. $1.4)\overline{13.86}$

4. $0.8)\overline{0.68}$

5. $1.7)\overline{10.54}$

6. $24)\overline{16.8}$

7. $0.07)\overline{0.35}$

8. $0.02)\overline{0.76}$

9. $0.05)\overline{0.15}$

10. $3.2)\overline{13.76}$

11. $0.03)\overline{0.45}$

12. $0.8)\overline{0.25}$

13. $0.4)\overline{0.85}$

14. $0.08)\overline{2.71}$

15. $0.3)\overline{0.81}$

16. $0.6)\overline{0.15}$

☐ I can divide decimals and justify my answer using multiplication.

Name _____

Finding Decimal Quotients

━━━━━━━━━━ CRITICAL THINKING AND PROBLEM SOLVING ━━━━━━━━━━

Grocery stores often advertise prices as 2 for a certain price, or 3 for a certain price. To decide whether the price is a good buy, you may want to figure out how much one item costs. Decimal division is used to do that. Find prices for one of each item listed below.

20. 12 ounce bowls of whipped topping

Price: 2 for $3

Cost for 1 = _____

21. 12 ounce cans of orange juice

Price: 4 for $5

Cost for 1 = _____

22. 21 ounce cheese or pepperoni pizza

Price: 2 for $4

Cost for 1 = _____

23. 16 ounce box of graham crackers

Price: 2 for $5

Cost for 1 = _____

24. 16 ounce bottles of iced tea

Price: 4 for $2

Cost for 1 = _____

25. Lawn & leaf bags — 10 count box

Price: $3

Cost for 1 = _____

26. Frozen dinners

Price: 5 for $6

Cost for 1 = _____

27. Boxes of gelatin

Price: 8 for $2

Cost for 1 = _____

Find the missing number in each division problem.

28. $\square \overline{)5.6}$ with 0.7 above

29. $\square \overline{)3.0}$ with 0.5 above

30. $\square \overline{)2.7}$ with 0.3 above

31. $\square \overline{)6.3}$ with 0.7 above

32. $\square \overline{)4.5}$ with 0.5 above

33. $\square \overline{)6.4}$ with 0.8 above

34. $\square \overline{)4.9}$ with 0.7 above

35. $\square \overline{)8.1}$ with 0.9 above

36. $\square \overline{)4.8}$ with 0.6 above

37. $\square \overline{)4.2}$ with 0.6 above

38. $\square \overline{)5.4}$ with 0.9 above

39. $\square \overline{)3.6}$ with 0.6 above

PRACTICE   Dividing by Whole Numbers—Using Zeros

Divide.

1. $2.7 \div 4 =$ _____

2. $1.8 \div 12 =$ _____

3. $28.21 \div 13 =$ _____

4. $3.036 \div 6 =$ _____

5. $4.035 \div 5 =$ _____

6. $83.64 \div 41 =$ _____

7. $9\overline{)0.0954}$

8. $81\overline{)2.268}$

9. $34\overline{)2.72}$

10. $44\overline{)2.552}$

11. $29\overline{)3.422}$

12. $43\overline{)45.15}$

13. $7\overline{)0.742}$

14. $30\overline{)64.02}$

15. $78\overline{)93.99}$

Solve.

16. Aileen jogged 12.2 kilometers yesterday. This is four times further than she was able to jog when she first started jogging. How far could Aileen jog when she first started?

_____

17. Aileen decided to try bicycle riding instead of jogging. During the month of July she rode a total of 776.86 kilometers. What was the average distance she rode each day? (HINT: There are 31 days in July.)

_____

PRACTICE | Dividing Decimals by Whole Numbers

Divide.

1. $37 \overline{)9.176}$

2. $9 \overline{)14.67}$

3. $29 \overline{)3.625}$

4. $5 \overline{)8.35}$

5. $13 \overline{)49.66}$

6. $7 \overline{)2.961}$

7. $3 \overline{)0.1671}$

8. $31 \overline{)12.772}$

9. $8 \overline{)36.4}$

10. $57 \overline{)407.55}$

11. $89 \overline{)59.986}$

12. $11 \overline{)89.452}$

13. $42 \overline{)219.66}$

14. $17 \overline{)2.091}$

15. $62 \overline{)26.536}$

16. $39 \overline{)121.68}$

17. $12 \overline{)64.92}$

18. $91 \overline{)240.24}$

19. $18 \overline{)115.56}$

20. $80 \overline{)14.880}$

21. $0.9 \div 3 =$ _____

22. $36.4 \div 26 =$ _____

23. $1.2 \div 4 =$ _____

24. $4.8 \div 8 =$ _____

25. $15.68 \div 7 =$ _____

26. $22.23 \div 19 =$ _____

27. $15.54 \div 7 =$ _____

28. $3.72 \div 3 =$ _____

29. $37.14 \div 6 =$ _____

Name_____

Sound energy can be measured in watts. This table shows the energy output of some musical instruments.

Instrument	Energy Output
Piano	0.44 watts
Trombone	6.4 watts
Snare Drum	12.3 watts
Human Voice	0.000024 watts

How many snare drums would it take to produce 73.8 watts of energy?

Think: 73.8 ÷ 12.3

$$\begin{array}{r} 6 \\ 123 \overline{)738} \\ -738 \\ \hline 0 \end{array}$$

So, 6 snare drums can produce 73.8 watts of energy.

Use the table to solve the problems.

1. How many trombones would it take to produce 1,280 watts of energy?

2. A piano can produce 8 times as much sound energy as a flute. How much energy does a flute produce?

3. About how many pianos playing together will produce the same sound energy as 1 snare drum?

4. A snare drum, a piano, and a trombone are all playing at once.
   A. What is the combined energy output of the instruments?

   B. What is the average energy output of the instruments?

5. How many pianos would produce 4.84 watts of energy?

6. A trombone can produce 80 times as much sound energy as a piccolo. What is the energy output of a piccolo?

7. What is the energy output of 1 million voices?

☐ I can solve real-world problems by dividing decimals.

3̃

Name_____

> When finding a unit cost, divide the total cost by the number of units:
> $Total Cost ÷ Number of Units = $Unit Cost
>
> . or
>
> $$\frac{\$Unit\ Cost}{Number\ of\ Units \overline{)\ \$Total\ Cost}}$$
>
> **Example:**
>
> Maria bought a 15-ounce bag of tortilla chips for $2.25. What is the cost per ounce?
>
> Number of Units ⟶ $15 \overline{)\ \begin{array}{r} 0.15 \\ 2.25 \\ -15 \\ \hline 75 \\ -75 \\ \hline 0 \end{array}}$ ⟵ Unit Cost (per ounce)
> ⟵ Total Cost
>
> So, the bag of tortilla chips cost $0.15 per ounce.

Solve each problem.

1. At Orchard Street Market, 4.5 pounds of pears cost $2.97. What is the cost per pound?

2. Mrs. Perez bought 30 ice-cream bars for her daughter's class party. She paid $12.60. How much did each ice-cream bar cost?

3. Sandra bought a 32.5-ounce package of mixed nuts for $7.15. What was the cost per ounce?

4. A $2.56 can of lemonade mix will make 64 cups of lemonade. What is the cost per cup?

5. Whole watermelons are sold for $3.99 each. Quan bought a watermelon that weighed 21 pounds. What price per pound did he pay?

6. A package of 100 napkins costs $2.00. What is the cost per napkin?

I can solve real-world problems by dividing decimals.

Name _____

Multiplying by 10, 100, and 1,000

=========================== SKILLS ===========================

Use mental math to find each product.

1. $7.42 \times 10 =$ _____

2. $8.361 \times 1,000 =$ _____

3. $12.91 \times 100 =$ _____

4. $25.734 \times 100 =$ _____

5. $426.95 \times 10 =$ _____

7. $0.59 \times 100 =$ _____

9. $3.042 \times 1,000 =$ _____

> To multiply a decimal by 10, move the decimal point one place to the right.
>
> To multiply a decimal by 100, move the decimal point two places to the right.
>
> To multiply a decimal by 1,000, move the decimal point three places to the right.

6. $3.425 \times 1,000 =$ _____

8. $49.6 \times 10 =$ _____

10. $75.436 \times 100 =$ _____

Find each product.

11.
$$\begin{array}{r} 0.82 \\ \times\ 10 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 1.34 \\ \times\ 10 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 100 \\ \times\ 0.21 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 6.93 \\ \times\ 100 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 1,000 \\ \times\ 3.28 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 100 \\ \times\ 6.4 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 7.46 \\ \times\ 10 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 3.82 \\ \times\ 1,000 \\ \hline \end{array}$$

Circle the missing number in each multiplication problem.

19. $63.45 \times ? = 634.5$
 a. 10 b. 100 c. 1,000

20. $5.963 \times ? = 5,963$
 a. 10 b. 100 c. 1,000

21. $2.94 \times ? = 2,940$
 a. 10 b. 100 c. 1,000

22. $42.63 \times ? = 4,263$
 a. 10 b. 100 c. 1,000

23. $0.45 \times ? = 45$
 a. 10 b. 100 c. 1,000

24. $0.1245 \times ? = 12.45$
 a. 10 b. 100 c. 1,000

Name _____

Multiplying by 10, 100, and 1,000

CRITICAL THINKING AND PROBLEM SOLVING

25. Titan, one of Saturn's moons, has a diameter of $(5.15 \times 1,000)$ kilometers. Evaluate the expression to find Titan's diameter.

Titan's diameter is _____ kilometers.

26. The Gobi Desert in Central Asia is $(401.5 \times 1,000)$ square miles in area. Evaluate the expression to find the area.

The area of the Gobi Desert is _____ square miles.

27. The area of Hawaii, Hawaii is (40.37×100) square kilometers. Evaluate the expression to find Hawaii's area.

Hawaii has an area of _____ square kilometers.

28. Mt. McKinley, the highest mountain in the United States is $(20.32 \times 1,000)$ feet high. Evaluate the expression to find Mt. McKinley's height.

Mt. McKinley is _____ feet high.

29. The Nile River, the longest river in the world, is (66.7×100) kilometers long. Evaluate the expression to find the Nile's length.

The Nile River is _____ miles long.

30. Niagara Falls has a flow of about (58.3×100) cubic meters per second. Evaluate the expression to find the amount of water going over the falls.

Niagara Falls has an average flow of _____ cubic meters per second.

Choose the best estimate for each product.

31. 3.8×4.3
    12   16   20   15

32. 2.1×8.9
    16   19   18   10

33. 4.7×6
    6   24   42   30

34. 0.98×6.1
    5   6   7   8

35. 0.9×7.9
    8   9   7   6

36. 6.8×8.9
    48   56   63   54

37. 9.8×6.9
    54   63   72   70

38. 7.8×11
    88   77   80   71

35

Name _____

Dividing Decimals by 10, 100, and 1,000

================================ SKILLS ================================

Divide by 10	Divide by 100	Divide by 1,000
Move decimal point one place to the left.	Move decimal point two places to the left.	Move decimal point three places to the left.

Use mental math to find each quotient.

1. $0.63 \div 10 =$ _____

2. $0.63 \div 100 =$ _____

3. $0.63 \div 1,000 =$ _____

4. $23.7 \div 10 =$ _____

5. $23.7 \div 100 =$ _____

6. $23.7 \div 1,000 =$ _____

7. $4.6 \div 10 =$ _____

8. $23.6 \div 100 =$ _____

9. $42.7 \div 1,000 =$ _____

10. $563 \div 10 =$ _____

11. $726 \div 100 =$ _____

12. $483 \div 1,000 =$ _____

Use 10, 100, or 1,000 to make each division statement true.

13. $45.7 \div$ _____ $= 0.457$

14. $73.5 \div$ _____ $= 7.35$

15. $6.46 \div$ _____ $= 0.0646$

16. $237 \div$ _____ $= 0.237$

17. $9.61 \div$ _____ $= 0.961$

18. $78.9 \div$ _____ $= 7.89$

19. $364.2 \div$ _____ $= 3.642$

20. $20.63 \div$ _____ $= 0.02063$

Find each quotient.

21. $0.36 \div 10 =$ _____

22. $0.75 \div 10 =$ _____

23. $0.32 \div 100 =$ _____

24. $0.97 \div 100 =$ _____

25. $196.8 \div 100 =$ _____

26. $567.3 \div 1,000 =$ _____

27. $86.4 \div 1,000 =$ _____

28. $70.9 \div 10 =$ _____

36

Dividing Decimals by 10, 100, and 1,000

―――――――― CRITICAL THINKING AND PROBLEM SOLVING ――――――――

Use the given numbers to write a correct decimal division statement.

29. 236.4 ÷ _____ = _____

10	0.02364
100	2.364
1,000	236.4

30. 75.04 ÷ _____ = _____

10	7,504
100	750.4
1,000	0.07504

31. 76.93 ÷ _____ = _____

10	0.007693
100	7.693
1,000	769.3

32. 73.09 ÷ _____ = _____

10	0.7309
100	730.9
1,000	0.007309

33. 7,563 ÷ _____ = _____

10	0.7563
100	7.563
1,000	75,630

34. 798.7 ÷ _____ = _____

10	7,987.0
100	0.07987
1,000	7.987

35. Lake Michigan is the fifth largest lake in the world. It has an area of (222,780 ÷ 10) square miles. Evaluate the expression to find the area.

The area of Lake Michigan is _____ square miles.

36. Aswan, Egypt is the driest place in the world where people live. It receives (2 ÷ 100) inch of rain per year. Evaluate the expression to find the annual rainfall.

Aswan, Egypt receives _____ inch of rain each year.

37. Marquette, Michigan receives (12,920 ÷ 100) inches of snow each year. Evaluate the expression to find the annual snowfall.

Marquette receives _____ inches of snow each year.

38. A common shrew weighs about (11.25 ÷ 1,000) pound. It is one of the smallest mammals. Evaluate the expression to find its weight.

A common shrew weighs _____ pound.

39. A brown bat is about (13.3 ÷ 100) foot in length. Evaluate the expression to find its length.

A little brown bat is _____ foot in length.

DECIMALS

ADDING & SUBTRACTING

1. Rewrite vertically
2. Line up decimal points
3. Add in missing zeroes
4. Add or Subtract

MULTIPLYING

1. Multiply
2. Count up # of decimal places in factors
3. Make product have the same number of decimal places
4. Simplify

DIVIDING~
Divisor is a Whole Number

1. Locate decimal point
2. "Scoot" up decimal point
3. Divide
4. Add zeroes if necessary to bring down

DIVIDING~
Divisor is a Decimal

1. Move the decimal point to the end of the divisor
2. Move the decimal point the same # of places in the dividend
3. "Scoot" up decimal point
4. Divide
5. Add zeroes if necessary to bring down

Name:

Date:

Fraction/Decimal/Percent Conversions

Complete the following chart with the missing information.

Fraction	Decimal	Percent
$\frac{3}{100}$		
	.05	
		7%
	.12	
$\frac{9}{100}$		
		15%
$\frac{11}{100}$		
	.01	
		5%
$\frac{7}{100}$		
		19%
		23%
	.16	
$\frac{19}{100}$		
$\frac{27}{100}$		

Name: Date:

Fraction/Decimal/Percent Conversions

Complete the following chart with the missing information.

Fraction	Decimal	Percent
		9%
	.07	
$\frac{11}{100}$		
	.17	
$\frac{9}{100}$		
		12%
$\frac{1}{100}$		
	.1	
		20%
$\frac{14}{100}$		
$\frac{19}{100}$		
	.16	
		5%
	.17	
$\frac{30}{100}$		

Name: Date:

Fraction/Decimal/Percent Conversions

Complete the following chart with the missing information.

Fraction	Decimal	Percent
$\dfrac{1}{5}$		
	.15	
		137%
	.03	
$\dfrac{4}{25}$		
		17%
$\dfrac{1}{4}$		
	.88	
		92%
$\dfrac{17}{50}$		
		108%
		85%
	1.1	
$\dfrac{79}{100}$		
$1\dfrac{1}{100}$		

Name: Date:

Fraction/Decimal/Percent Conversions

Complete the following chart with the missing information.

Fraction	Decimal	Percent
$\dfrac{3}{5}$		
	.15	
		97%
	1.08	
$\dfrac{9}{20}$		
		7%
$\dfrac{1}{3}$		
	.9	
		92%
$\dfrac{27}{50}$		
		116%
		95%
	1.15	
$\dfrac{87}{100}$		
$1\dfrac{7}{100}$		

Estimating with Fractions and Decimals

1. Place the following fractions and decimals on the number line below.

$$\frac{23}{25}, \ .2, \ \frac{1}{99}, \ \frac{19}{38}, \ \frac{4}{12}, \ .03, \ \frac{6}{30}, \ \frac{75}{100}$$

0 ———————————————— 1
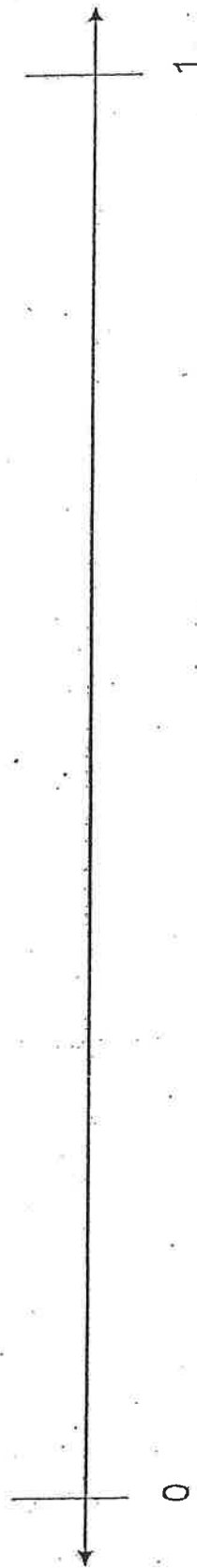
2. Place the following fractions and decimals on the number line below.

$$\frac{2}{95}, \ \frac{65}{100}, \ .89, \ \frac{9}{63}, \ .7, \ \frac{45}{49}, \ .08, \ \frac{52}{104}$$

0 ———————————————— 1
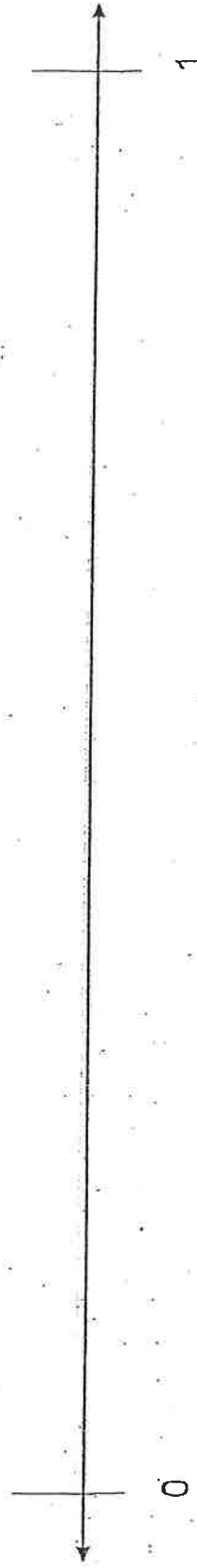
Estimating with Fractions

3. Place the following fractions and decimals on the number line below.

$$\frac{23}{42}, \frac{9}{72}, .68, \frac{89}{95}, \frac{6}{18}, .9997, \frac{12}{144}, .48$$

0 — — — — — — — — — — — — — — — — — 1
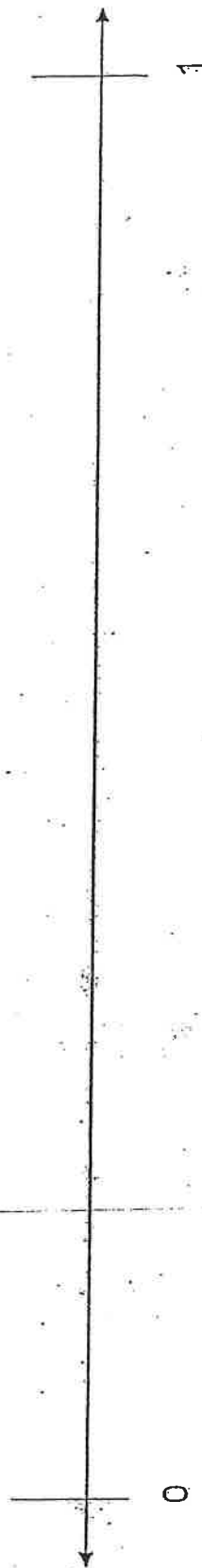
4. Place the following fractions and decimals on the number line below.

$$\frac{11}{99}, .008, \frac{32}{68}, .29, \frac{87}{101}, \frac{15}{60}, \frac{51}{53}, \frac{7}{77}, .59$$

0 — — — — — — — — — — — — — — — — — 1
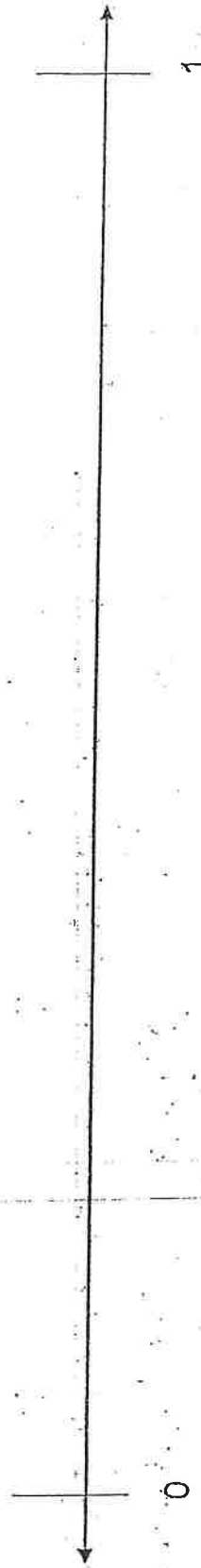
Estimating with Fractions

5. Place the following fractions and decimals on the number line below.

$$84\%, \quad \frac{19}{38}, \quad \frac{36}{80}, \quad .69, \quad 8\%, \quad \frac{24}{30}, \quad .37, \quad 56\%, \quad \frac{34}{35}, \quad \frac{2}{45}$$

0 ——————————————————— 1
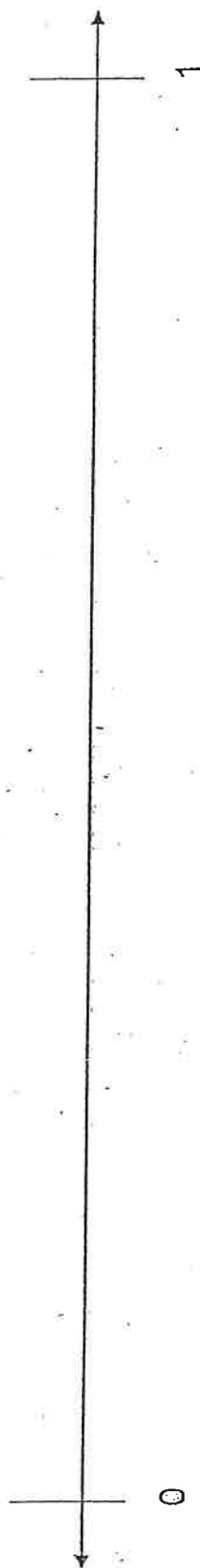
6. Place the following fractions and decimals on the number line below.

$$\frac{11}{25}, \quad 53\%, \quad \frac{57}{59}, \quad \frac{13}{28}, \quad .73, \quad \frac{28}{35}, \quad 17\%, \quad \frac{4}{6}, \quad 94\%, \quad \frac{1}{50}$$

0 ——————————————————— 1
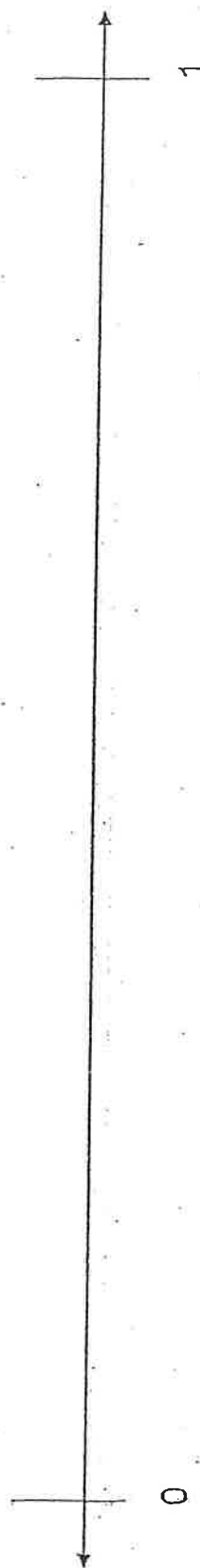
Estimating with Fractions

7. Place the following fractions and decimals on the number line below.

$\frac{15}{60}$, 79%, $\frac{10}{110}$, 35%, .9, $\frac{7}{70}$, .64, 22%, $\frac{27}{36}$, .9,
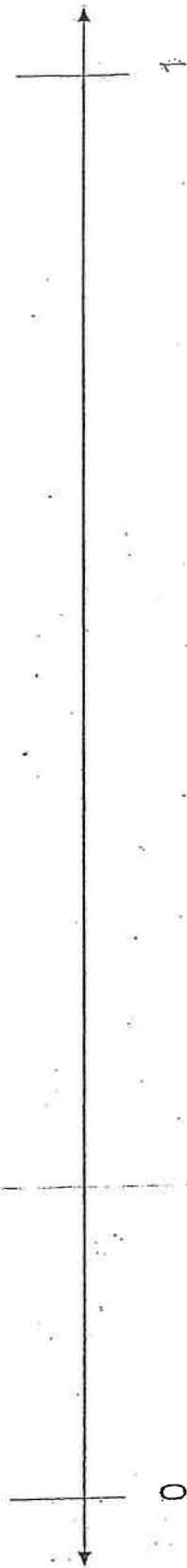
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0 ──────────────────── 1
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8. Place the following fractions and decimals on the number line below.

$\frac{12}{20}$, .002, $\frac{11}{26}$, .64, 7%, $\frac{80}{82}$, .36, 71%, $\frac{6}{66}$, 57%

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0 ──────────────────── 1
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Name_____   Date_____

Word Problems – Multiplying and Dividing with Decimals
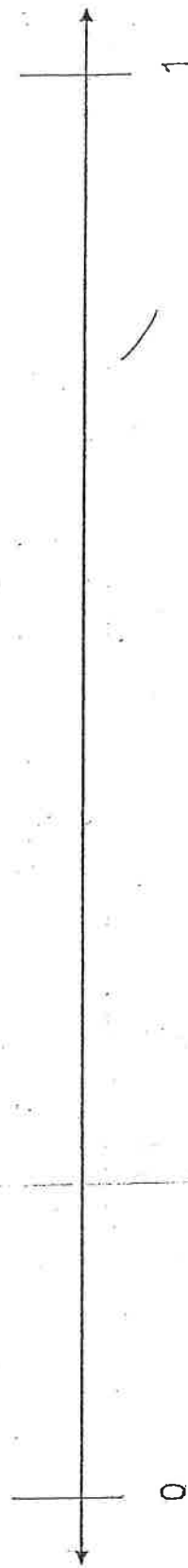
Directions: Solve each problem. Show your work and label your answer.

1)   Lena bought 7 books that were $5.95 each. How much did she spend on books?

2)   Over a 4-day period, 1.56 inches of snow fell in New Jersey. What was the average amount of snowfall each day?

3)   Four games cost $28.32. Each game was the same price. How much was each game?

4)   A football weighs 0.43 kilograms. How much do 5 footballs weigh?

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5) Kyle can earn $6.75 an hour doing yard work. How much can he earn in 7 hours?

6) Lily can earn $7.25 per hour washing cars. She can earn $6.25 doing yard work. Would she make more money washing cars for 6 hours or doing yard work for 7 hours? Explain your thinking.

7) Julia rented a bike for week when she visited her cousin. The rental cost for the bike was $12.95 per day. She had her own helmet, but the strap broke on the third day, so she had to rent a helmet for the last four days at a cost of $2.25 per day. How much did it cost to rent the bike and the helmet?

8) Sammy divided 6.12 by 3 and got the quotient 2.4. Find the correct quotient and explain what you think Sammy did wrong.

9) A football field is about 0.03 miles wide and about 0.07 miles long. What is the area of the field in square miles?

10) What is the area of a rectangular flower garden whose length is 0.98 meters and width is 0.1 meters?

Supermarket Sweep!

Partner Names :_____

You will use a weekly grocery store ad to make a grocery list. You may want to buy two to four of each item, if you think you can use them. This store will not allow customers to buy more than four of any one sale item.

1. Read through the entire ad first, then begin selecting their items.
2. Choose carefully to get healthy items for your kitchen.
3. List the items to be purchased, fill in how many you want to buy, estimate the total, find the exact total, and determine how much money will be left on the gift card after you make your purchases.

The "class challenge" is to see who can have the least leftover money or spend their amount exactly.

Supermarket Sweep!

Name _____   Date _____

Name of item	Quantity to buy (How many?)	Price for 1	Cost for item/s	Estimated cost of item (rounded to nearest tenth)
		$	$	$
		Total =		

Amount left on Gift Card:

Part Two

"Uh-oh. Before going to the store to use your carefully planned list to make purchases, you hurt your ankle, so you had to use your gift card for a $13 bandage and $6 tube of ointment. Look at your original list and pare it down (make a new list) of items that you can buy with the amount of money that is now left on the gift card."

Name of item	Quantity to buy (How many?)	Price for 1	Cost for item/s	Estimated cost of item (rounded to nearest tenth)
		$	$	$
		Total =		

If you finish and there is still time left: Work with your partner and order the prices of the items you are planning on purchasing from **least to greatest.**

Supermarket Sweep Homework

Name _____

Date _____

Charles won a $45 Amazing Books on-line store gift card as a door prize.

He wants to buy 4 books and will choose from the list below:

- *The Storm Makers* $16.00
- *Judy Moody and the NOT Bummer Summer* $12.14
- *I've Won, No I've Won, No I've Won (Charlie and Lola)* $6.99
- *Frog and Toad Together* $13.60
- *The Bravest Dog Ever: The True Story of Balto* $3.99

Help Charles by making a suggested list of 4 books. There is a $5 shipping fee. **Show all of your work** and the total cost (including the $5 shipping fee).The total cannot be more than $45.

My suggested list of books for Charles to buy:

_____

_____

_____

_____

Estimate how much he would spend using your list. $_____

Exactly how much would he spend? $_____

Estimate how much he would have left on his gift card.$_____

Exactly how much would he have left on his gift card? $_____

Is your answer reasonable? _____

How did you decide?

_____

_____

Name_____   Date_____

Practice Problems: Decimals

1.   Clyde wrote this number: 352.867
       Sheila wrote this number: 589.021

       The digit 8 in Sheila's number represents how many times as much as the digit 8 in Clyde's
       number?

       a.   10 times
       b.   100 times
       c.   1,000 times
       d.   10,000 times

2.   The place value of the 3 in 0.3 is how many times the place value of the 3 in 30? Explain your
       answer.

       _____

       _____

       _____

       _____

3. What will be the result when 345.61 is

    a. divided by 10 :

    b. divided by 10^2 :

    c. divided by 10^5 :

    d. Use place value to explain how the number 345.61 changes when it is divided by a positive power of 10.

_____

_____

_____

_____

For questions 4-7, which symbol belongs in the box to make a true comparison? (use <, =, or >). Write your answer in the box.

4.   49.02 ☐ forty-nine and nineteen thousandths

5.   Eight and nine hundred six thousandths ☐ $8 \times 1 + 9 \times \frac{1}{10} + 1 \times \frac{1}{100}$

6.   Thirty-two and six hundred five thousandths ☐ $3 \times 10 + 2 \times 1 + 7 \times \frac{1}{10}$

7. Place the 4 numbers below in the boxes to make the full inequality statement below true.

0.098, 1.001, 0.108, 1.02

☐ > ☐ > ☐ > ☐

8. The table below shows the lengths of 4 pieces of rope.
    Write these lengths from shortest to longest.

Rope Lengths
Length (in meters)
5.46
5.089
5.6
5.17

9. What is 475.189 rounded to the nearest hundredth?

10. What is 0.5734 rounded to the nearest thousandth?

11. What is 635.974 rounded to the nearest tenth?

12. Sarina rounded a number to the nearest whole number and got 7. Which number could be the number Sarina rounded to the nearest whole number?

    a. 7.3782
    b. 7.6581
    c. 7.9275
    d. 8.3497

13. The number 5.267 will be rounded to the nearest hundredth.
    Between what two hundredths does 5.267 lie? Show these two values by placing numbers in the boxes below the number line. Place a point on the number line to show 5.267.

Explain why your answer is correct.

_____

_____

_____

_____

14. Jason wrote this number: 91,458,237

Kylie wrote this number: 1,285,307

The digit 8 in Jason's number represents how many times as much as the digit 8 in Kylie's number?

a. $\frac{1}{10}$ times

b.   1 times

c.   10 times

d.   100 times

15. Describe how the place value of the digit 6 in the number 0.068 is related to the place value of the digit 6 in the number 0.68.

_____

_____

_____

_____

16.

Population of Fairview: 293,705

Population of Baytown: 935,172

Based on the populations given above, place a check mark in the oval to indicate whether the statements about the populations of Fairview and Baytown are true or false.

	True	False
The place value of the digit 9 in the population of Fairview is 10 times the place value of the digit 9 in the population of Baytown.	○	○
The place value of the digit 7 in the population of Baytown is $\frac{1}{10}$ times the place value of the digit 7 in the population of Fairview.	○	○
The place value of the digit 3 in the population of Baytown is $\frac{1}{10}$ times the place value of the digit 3 in the population of Fairview.	○	○

17. Use the prices of the notebook and pencil below to fill in the blanks.

Price of notebook: $2.97

Price of pencil: $0.29

The value of the digit 2 in the price of the _____ is

$\frac{1}{10}$ times the value of the digit 2 in the price of the _____.

The value of the digit 9 in the price of the notebook is _____ times the value of the digit 9 in the price of the pencil.