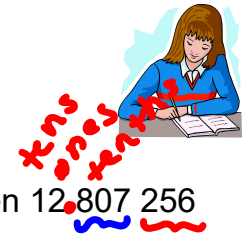


Warm up Grade 6

Date: _____

1)Given 12.807 256

a)Write the word for the above(so how you would read)

twelve and eight hundred seven thousandths

two hundred fifty-six millionths

b) Write the expanded form of the above number. (Decimal place values)

10 + 2 + 0.8 + 0.007 + 0.0002 + 0.00005 + 0.000006

Practice

1. Use a place-value chart to show each number.
   a) 2.3425 b) 0.142 86 c) 0.0007 d) 0.000 298

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths	Ten Thousandths	Hundred Thousandths	Millionths
						2	3	4	2	5		
						0	1	4	2	9	1	
						0	0	0	0	7		
						0	0	0	0	2	9	6

2. Use the numbers in the table.
   Write the number that has a 5 in:
   a) the ten-thousandths position
   b) the millionths position
   c) the thousandths position
   d) the hundred-thousandths position
   e) the tenths position

tenths hundredths thousandths ten-thousandths

0.635 734
0.506 312
1.003 825
3.702 456
2.184 592

a) 2.184 592
b) 1. 003 825
c) 0.635 734
d) 3.702 456
e) 0.506 312

3. Describe the meaning of each digit in 4.524 371.

The 4 to the left of the decimal point represents 4 ones, the 5 represents 5 tenths, the 2 represents 2 hundredths, the 4 to the right of the decimal point represents 4 thousandths, the 3 represents 3 ten-thousandths, the 7 represents 7 hundred-thousandths, and the 1 represents 1 millionth.

4. Write each number in standard form.
   a) 8 and 26 ten-thousandths
   b) 24 millionths
   c) 3 hundred-thousandths
   d) 4 and 374 millionths

a) 8.0 0 2 6
b) 0.0 0 0 0 2 4
c) 0.0 0 0 0 3
d) 4.0 0 0 3 7 4

TIP 5. Write each number in expanded form.

a) 0.0056 b) 0.000 49 c) 3.000 023 d) 0.348 619

a) 0.0056 = 0.005 + 0.0006

B) 0.000 49 = 0.000 4 + 0. 000 09

c) 3. 000 023 = 3 + 0.000 02 + 0. 000 003

d) 0.348 619 = 0.3 + 0.04 + 0. 008 + 0. 000 6 + 0.000 01 + 0.000 009

6. Write a decimal that is between:

a) 2.153 and 2.154 b) 0.6534 and 0.6535

2.1530 2.1540 0.65340 0.65350

2.1537, 0.65347,

7. Find two examples of very small numbers in the media. Write each number in a place-value chart. Explain how you use the patterns in the chart to read these numbers.

8. How are the values of the red digits in each number related?

hundred-thousandths

a) 5.000 05 b) 2.1433 c) 0.677 56 d) 4.234 654

8a) 5 ones are 100 000 times as great as 5 hundred-thousandths

b) 3 thousandths are 10 times as great as 3 ten-thousandths

c) 6 tenths are 10 000 times as great as 6 hundred-thousandths

d) 4 Thousandths are 1000 times as great as 4 millionths

9. Write the number in each fact in as many different forms as you can.

a) A strand of silk in the web of a garden spider has a diameter of about 0.000 003 m.

b) The diameter of one red blood cell is about 0.000 762 cm.

c) The mass of a grain of rice is about 0.000 02 kg.

a) 3 millionths, or three millionths;

b) 7 ten-thousandths + 6 hundred-thousandths + 2 millionths

or

0.0007 + 0.000 06 + 0.000 002

c) 0. 000 02 or 2 hundred-thousandths

or

two hundred-thousandths

10. Use any or all of these digits: 1, 0, 2, 0, 4, 0, 5, 0

a) Write 5 numbers less than one thousandth.

b) Which of your numbers is the least? How do you know?

c) Which of your numbers is the greatest? How do you know?

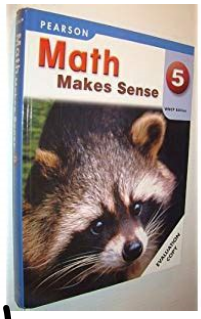
a) 0.000 12 , 0.0002, 0.000 42, 0.0005, 0.000 245

b) 0.000 12 it has the least amount of ten-thousandths

0 ones, 0 tenths, 0 hundredths, 0 thousandths,

d) 0.0005 all numbers have 0 ones, 0 tenths, 0 hundredths, and 0 thousandths but 0.0005 has the greates ten-thousandths

Grade Five	Grade Six
N5 Demonstrate an understanding of multiplication (2-digit by 2-digit) to solve problems. **N6** Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit) and interpret remainders to solve problems.	**N8** Demonstrate an understanding of multiplication and division of decimals (1-digit whole number multipliers and 1-digit natural number divisors).



Let's recall

$$\begin{array}{r} 27 \\ \times\ 49 \\ \hline 243 \\ +\ 1080 \\ \hline 1323 \end{array}$$

Area Model

Box method

54 x 92

	50	4
90	50 x 90 = 4500	90 x 4 = 360
2	2 x 50 = 100	2 x 4 = 8

4500 + 360 + 100 + 8 = 4968

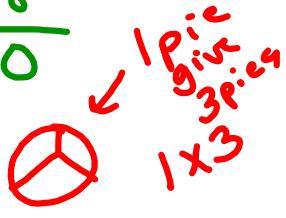
54 x 92 = 4968

454 ÷ 8

$$\begin{array}{r} 56\ R6 \\ 8\overline{)454} \\ -40\downarrow \\ \hline 54 \\ -48 \\ \hline 6 \end{array}$$

288 ÷ 6

$$\begin{array}{r} 48 \\ 6\overline{)288} \\ -24\downarrow \\ \hline 48 \\ -48 \\ \hline 0 \end{array}$$



30

Jim brought 28 pies to class and cut each pie into 3 pieces. Estimate how many pieces of pie were there.

Estimate 30

30 x 3

≈ 90 pieces

Long Multiplication

$$
\begin{array}{r}
76 \\
\times\ 23 \\
\hline
228 \\
+\ 1520 \\
\hline
1748
\end{array}
$$

Box Method

49 x 81

	40	9
80	80 x 40 = 3200	80 x 9 = 720
1	1 x 40 = 40	1 x 9 = 9

$$
\begin{array}{r}
3200 \\
720 \\
40 \\
+\ 9 \\
\hline
3969
\end{array}
$$

Worksheet 2 digit or more multiplication

Show work with long multiplication

1) 67
x 24

2) 29
x 31

3) 78
x 42

4) 85
x 75

5) 23
x 18

6) 12
x 56

7) 285
x 18

8) 129
x 64

Calculate product with area model (area model)

9) 92 x 48

10) 27 x 86

11) 345 x 62

Front

1, 2, 3, 7, 9

back

1, 2

Worksheet 2 Continues Quotient

Show work with long division (Show any remainders)

1) 458 ÷ 7

2) 240 ÷ 9

3) 187 ÷ 2

4) 936 ÷ 5

5) 3904 ÷ 4

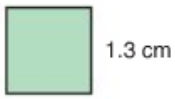
Practice

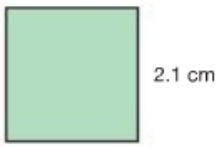
1. Estimate each product or quotient. Which strategies did you use?
   Tell if your estimate is an overestimate or an underestimate.
   a) 7.01×9 b) 3.8×7 c) 11.85×5 d) 19.925×4
   e) $9.8 \div 5$ f) $12.31 \div 2$ g) $56.093 \div 7$ h) $225.3 \div 5$

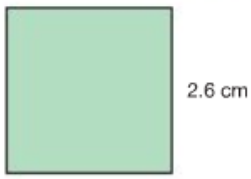
2. Waldo paid $29.85 for 3 admission tickets to the Calgary Tower.
   Estimate the cost of one admission ticket.

3. A pair of ice cleats for ice fishing costs $14.89.
   About how much will 6 pairs of ice cleats cost?
   How did you find out?

4. Estimate the perimeter of each square.
   Tell if your estimate is an overestimate or an underestimate.
   How do you know?

a) 

b) 

c) 

5. Estimate the side length of a square with perimeter:
   a) 24.2 cm b) 29.8 cm c) 35.6 cm

6. a) Is 9.47×5 greater than, or less than, 45?
   How can you estimate to find out?
   b) Is $23.86 \div 4$ greater than, or less than, 6?
   How can you estimate to find out?
   Show your work.

7. Copy and complete. Write $>$, $<$, or $=$.
   How did you decide which symbol to use?
   a) $5.6 \times 2 \square 1.4 \times 4$ b) $4.8 \div 2 \square 15.5 \div 5$