Warm up Grade 6

Date: Nov. 20

1)use the numbers 7, ~~0~~, 6, ~~0~~, 8, 1, ~~0~~, ~~0~~ 0.001

a)Write 4 numbers less than one thousandths

0.0001678
0.0001768
0.0001867

0.000 1 876

b) Record you numbers in part 'a' from least to greatest

0.0001678
0.0001768
0.0001867
0.0001876

2) Give a number between 3.456 and 3.457

3.45600 3.45700

3.45650

Worksheet 2 digit or more multiplication

Homework Solutions

Show work with long multiplication

1) 67
x 24
268
+ 1340
1608

2) 29
x 31
29
+ 870
899

3) 78
x 42
156
+3120
3276

4) 85
x 75
425
+ 5950
6375

5) 23
x 18
184
+ 230
414

6) 12
x 56
72
+ 600
672

7) 285
x 18
5130
+ 2850
7980

8) 129
x 64
516
+ 7740
8256

Calculate product with area model (area model)

9) 92 x 48

	90	2
40	90 x 40 3600	40 x 2 80
8	90 x 8 720	8 x 2 16

3600
720
80
+ 16
4416

92 x 48 = 4416

10) 27 x 86

	80	6
20	20 x 80 1600	20 x 6 120
7	7 x 80 560	7 x 6 42

1600
560
120
+ 42
2332

86 x 82 = 2332

11) 345 x 62

	300	40	5
60	300 x 60 18000	40 x 60 2400	5 x 60 300
2	2 x 300 600	2 x 40 80	2 x 5 10

18000
2400
300
600
80
+ 10
21390

62 x 345 = 21 390

Worksheet 2 Continues Quotient

Homework Solutions

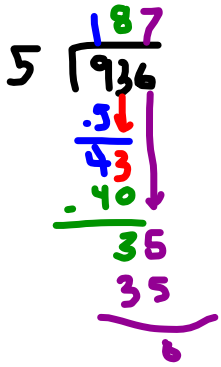
Show work with long division (Show any remainders)

1) 458 ÷ 7

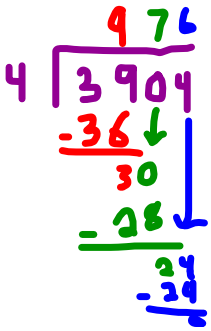
2) 240 ÷ 9

3) 187 ÷ 2

4) 936 ÷ 5



5) 3904 ÷ 4



Practice

1. 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	1

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

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) 8.0026
b) 0.000024
c) 0.00003
d) 4.000374

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

2.1530 2.1540

2.1537,

b) 0.6534 and 0.6535

0.65340 0.65350

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?

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

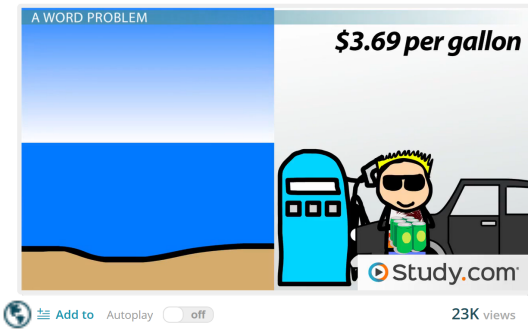
two hundred-thousandths

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

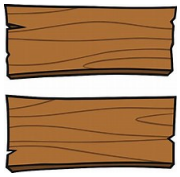
b) 0.000 12 it has the least amount of ten-thousandths
0 ones, 0 tenths, 0 hundredths, 0 thousandths,

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



You try

A board measures 7.78 m. Estimate the length of 6 boards.



Two strategies

a) Front end estimation of decimals

-Front end we only use the leftmost place or the very last number on the left.

7.78m becomes 7

Estimation : 7 m x 6 boards

= 42 m

This is an underestimation since 7 is smaller than 7.78

b) Bench marks

- rounding to the nearest whole number or largest place value using

4 or smaller stays the same

5 or greater round up,

7.78m becomes 8

This is an over estimate since 8 is ~~smaller~~ larger than 7.78

Estimation : 8m x 6 blocks
= 48m

Calculator Answer: 7.78m x 6

=46.68m

So our estimations

3 bags of flour have a total of 628.25 g. Estimate the mass of 1 bag of flour. (Is your estimation and under or over estimation?)

Two strategies

a) Front end estimation of decimals

628 g becomes 600 g

Estimation : 600g ÷ 3

= 200 g

The mass of 1 bag of flour is about 200g

b) Bench marks

628.25 g becomes 630

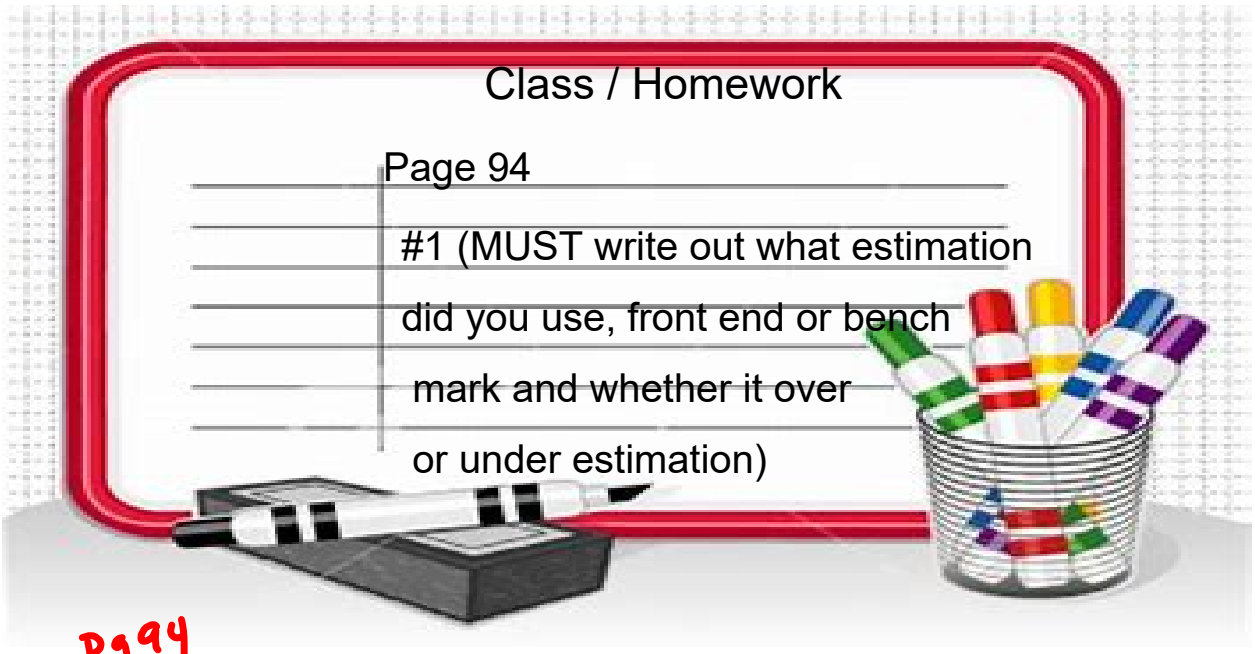
Estimation : 630g ÷ 3

= 210g

The mass of 1 bag of flour is about 210g

Actual 628.25g ÷ 3

= 209.41g



pg 94

1) a) 7.01 x 9

7 x 9 = 63

Front or Bench

under

b) 3.8 x 7

Front

3 x 7 = 21

under

Bench

4 x 7 = 28

over

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

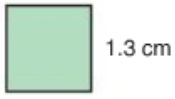
   e) $9.8 \div 5$ **f)** $12.31 \div 2$ **g)** $56.093 \div 7$ **h)** $225.3 \div 5$

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

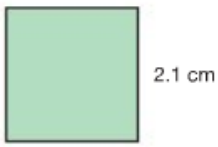
3. A pair of ice cleats for ice fishing costs $14.89.
   About how much will 6 pairs of ice cleats cost?
   How did you find out?

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

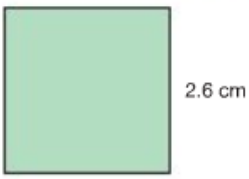
a)



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) $4.8 \div 2 \square 15.5 \div 5$