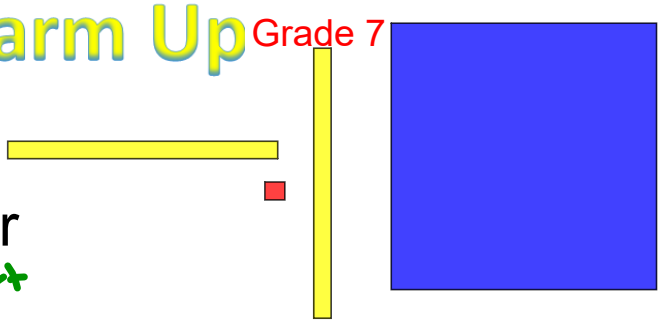
Warm Up Grade 7



Model and answer

long short long short

a) 2.4 x 1.5

ones. tenth hundr

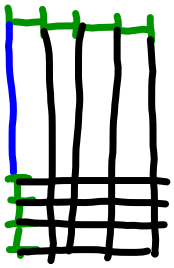
2 ones 2.00

14 tenths 1.40

20 hundredths + 0.20

3.60

b) 0.4x 1.3



0 ones 0.00

4 tenths 0.40

12 hundredth + 0.12

0.52

Quiz tomorrow

Examples

1) adding decimals a) 12.36 + 0.258

2) multiplying decimals a) 15.7 x 0.6 = 9.42

Rounding a decimal to the tenths place a) 127.62 b) 0.975

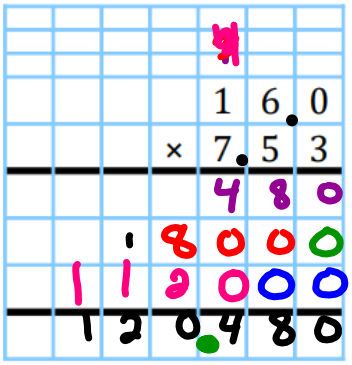
model multiplication of decimals with area model a) 1.3 x 2.5

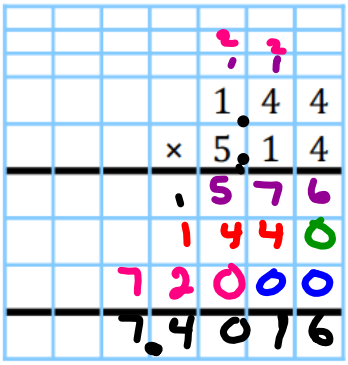
1a)
$$\begin{array}{r} 12.360 \\ +\ \ 0.258 \\ \hline 12.618 \end{array}$$

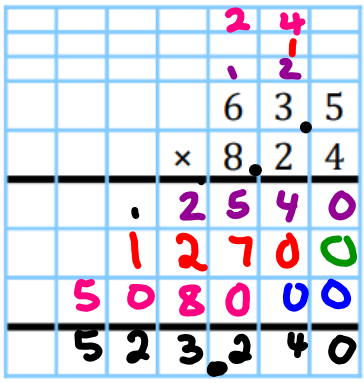
Must line up "."
→ make same length by putting '0' in

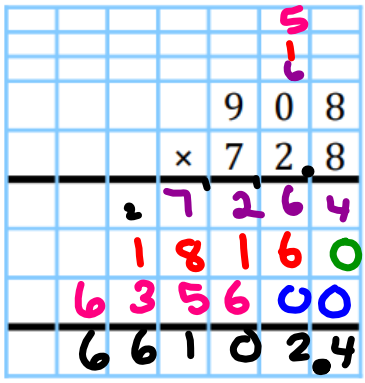
16 pts total

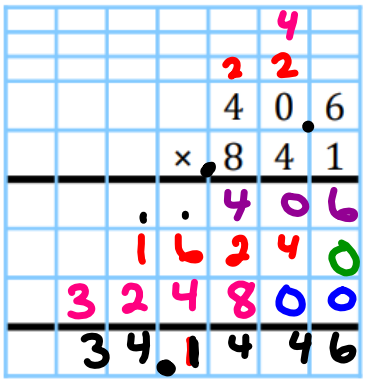
2)
$$\begin{array}{r} 15.7 \\ \times\ \ \ 0.6 \\ \hline 9.42 \end{array}$$

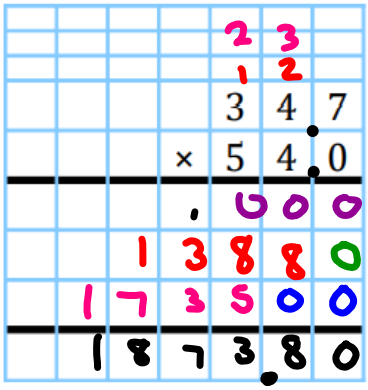


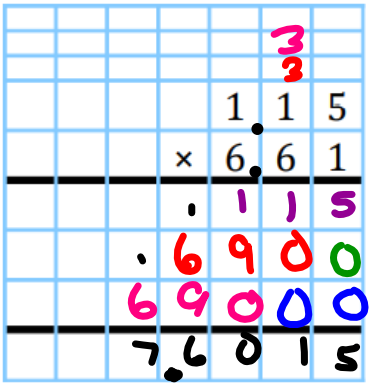


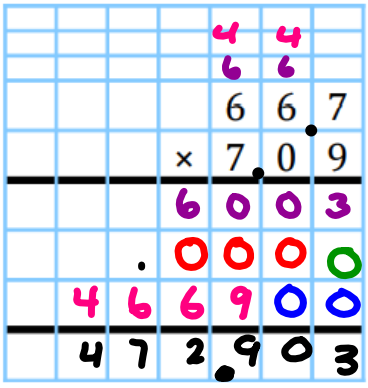












				1		
				3	1	
				5	5	2
			×	3	1	6
			3	3	1	2
		.	5	5	2	0
	1	6	5	6	0	0
	1	7	4	4	3	2

				4		
				1	6	0
			×	7	5	3
				4	8	0
		.	8	0	0	0
	1	1	2	0	0	0
	1	2	0	4	8	0

				2	2	
				1	1	
				1	4	4
			×	5	1	4
			.	5	7	6
			1	4	4	0
		7	2	0	0	0
		7	4	0	1	6

				2	4	
					1	
				1	2	
				6	3	5
			×	8	2	4
		.	2	5	4	0
		1	2	7	0	0
	5	0	8	0	0	0
	5	2	3	2	4	0

					5	
					1	
					6	
				9	0	8
			×	7	2	8
		.	7	2	6	4
		1	8	1	6	0
	6	3	5	6	0	0
	6	6	1	0	2	4

					4	
				2	2	
				4	0	6
			×	8	4	1
		.	.	4	0	6
		1	6	2	4	0
	3	2	4	8	0	0
	3	4	1	4	4	6

				2	3	
				1	2	
				3	4	7
			×	5	4	0
			.	0	0	0
		1	3	8	8	0
	1	7	3	5	0	0
	1	8	7	3	8	0

					3	
					3	
				1	1	5
			×	6	6	1
			.	1	1	5
		.	6	9	0	0
		6	9	0	0	0
		7	6	0	1	5

				4	4	
				6	6	
				6	6	7
			×	7	0	9
			6	0	0	3
		.	0	0	0	0
	4	6	6	9	0	0
	4	7	2	9	0	3

4. Multiply. Use a rectangle model.

a) 4.2×3.7 b) 8.9×0.3 c) 0.6×0.9

$$\begin{array}{r} {}^{1}4.2 \\ \times 3.7 \\ \hline {}^{1}294 \\ 1260 \\ \hline 1.54 \end{array}$$

$\approx 4 \times 4$
16

$$\begin{array}{r} {}^{2}8.9 \\ \times 0.3 \\ \hline 2.67 \end{array}$$

$\frac{-1}{3}$ 8.9
3

$$\begin{array}{r} 0.6 \\ \times 0.9 \\ \hline 0.54 \end{array}$$

< 1

5. A rectangular plot of land measures 30.5 m by 5.3 m.
What is the area of the plot?
Estimate to check your answer is reasonable.

$A = l \times w$
30.5×5.3

$\approx 30 \times 5$
150

$$\begin{array}{r} \times 2 \\ 30.5 \\ 5.3 \\ \hline {}^{1}915 \\ 15250 \\ \hline 161.65 \end{array} m^2$$

Homework Solutions

5. A rectangular plot of land measures 30.5 m by 5.3 m.
What is the area of the plot?
Estimate to check your answer is reasonable.

$A = l \times w$

30.5×5.3

$\approx 30 \times 5$

150

30.5×5.3

915

15250

$161.65\ m^2$

6) Multiply. Describe the pattern

a) $8.36 \times 10 = 83.6$

$8.36 \times 100 = 836$

$8.36 \times 1000 = 8360$

$8.36 \times 10\,000 = 83\,600$

When you multiply by multiples of 10 (10,100, 1000..), the digit in the product moves one place to the left each time. (Or, the decimal point moves one place to the right each time.)

a) $8.36 \times 0.1 = 0.836$

$8.36 \times 0.01 = 0.0836$

$8.36 \times 0.001 = 0.00836$

$8.36 \times 0.0001 = 0.000836$

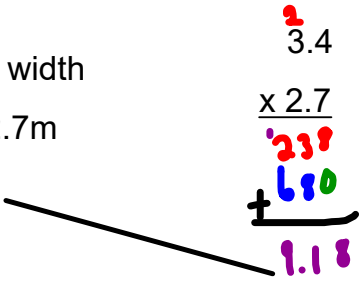
When you multiply by multiples of 0.1 (0.1,0.01, 0.001..), the digit in the product moves one place to the right each time. (Or, the decimal point moves one place to the left each time.)

Homework Solutions

7) Area = length x width

= 3.4m x 2.7m

= 9.18 m^2



8) a) 2.7 x 4.786 = 12.9222

b) 12.52 x 13.923 = 174.31596

c) 0.986 x 1.352 = 1.333072

Homework Solutions

9. The fuel consumption estimates of Josie's car are:
City: 21.2 km/L Highway: 23.3 km/L
The car's gas tank holds 40.2 L of fuel.
a) How far could Josie drive on a full tank of gas on the highway before she runs out of fuel?
b) How far could she drive on a full tank of gas in the city?
What assumptions did you make?

a)
$$\begin{array}{r} 23.3 \\ \times\ 40.2 \\ \hline 466 \\ 93200 \\ \hline 936.66 \end{array}$$

she can drive 936.66 km on a full tank.

b)
$$\begin{array}{r} 21.2 \\ \times\ 40.2 \\ \hline 424 \\ 84800 \\ \hline 852.24 \end{array}$$

In the city she can drive 852.24 km

10. Find the cost of each item at the Farmers' Market.
Which strategy will you use? Justify your choice.
a) 2.56 kg of apples at $0.95/kg
b) 10.5 kg of potatoes at $1.19/kg
c) 0.25 kg of herbs at $2.48/kg

a)
$$\begin{array}{r} 2.56 \\ \times\ 0.95 \\ \hline 1280 \\ 23040 \\ \hline 2.4320 \end{array}$$

$\approx \$2.50$

Apples $2.43

b)
$$\begin{array}{r} 10.5 \\ \times\ 1.19 \\ \hline 945 \\ 1050 \\ 10500 \\ \hline 12.495 \end{array}$$

or $12.50

$10 \times 1.19 = 11.90$
$0.5 \times 1.19 = 0.60$
12.50

c)
$$\begin{array}{r} 2.48 \\ \times\ 0.25 \\ \hline 1240 \\ 4960 \\ \hline .6200 \end{array}$$

$\frac{1}{4}$ of $2 → 0.50
$\frac{1}{4}$ of 48¢ → 0.12
= 0.62

11. The product of 2 decimals is 0.36.
What might the decimals be?
Find as many answers as you can.

Homework Solutions

$4 \times 9 = 36$, so $0.4 \times 0.9 = 0.36$
$2 \times 18 = 36$, so $0.2 \times 1.8 = 0.36$
$1 \times 36 = 36$, so $0.1 \times 36 = 0.36$
$3 \times 12 = 36$, so $0.3 \times 12 = 0.36$

12. a) Multiply 18×12.
b) Use only the result from part a and estimation.
Find each product.
i) 1.8×12 ii) 18×0.12 iii) 0.18×12 iv) 0.18×0.12
Explain your strategies.

a)
$$\begin{array}{r} 18 \\ \times\ 12 \\ \hline \end{array}$$
$10 \times 18 = 180$
$2 \times 18 = 36$
216

b) $1.8 \times 12 = 21.6$
$18 \times 0.12 = 2.16$
$0.18 \times 12 = 2.16$
$0.18 \times 0.12 = 0.0216$

13. Take It Further

Homework Solutions

a) Multiply.

i) 6.3×1.8 ii) 0.37×0.26 iii) 3.52×2.4 iv) 1.234×0.9

b) Look at the questions and products in part a.
What patterns do you see in the numbers of decimal places in the question and the product?
How could you use this pattern to place the decimal point in a product without estimating?

c) Multiply: 2.6×3.5
Does the pattern from part b hold true?
If your answer is no, explain why not.

a) 6.3×1.8

$\approx 6 \times 2 = 12$

$$\begin{array}{r} 6.3 \\ \times\ 1.8 \\ \hline 504 \\ 630 \\ \hline 11.34 \end{array}$$

b) 0.37×0.26

$$\begin{array}{r} 0.37 \\ \times\ 0.26 \\ \hline 222 \\ 740 \\ \hline .0962 \end{array}$$

c) 3.52×2.4

$\approx 3.5 \times 2 = 7$

$$\begin{array}{r} 3.52 \\ \times\ \ 2.4 \\ \hline 1408 \\ 7040 \\ \hline 8448 \end{array}$$

d) 1.234×0.9

≈ 1.234

$$\begin{array}{r} 1.234 \\ \times\ 0.9 \\ \hline 1.1106 \end{array}$$

1) 12.36 x 7.2

12.36
x 7.2
2472
86520
88992

2) 3.25 x 0.4

3.25
x 0.4
1300

3) 1.9 x 2.37

2.37
x 1.9
2133
2370
4503

4) 14.7 x 6.2

14.7
x 6.2
294
8820
9114

5) 60.7 x 124

60.7
x 124
2428
12140
+ 60700
75268

6) 8 x 54.7

54.7
x 8
4376

7) 12.7 + 0.25

12.70
+ 0.25
12.95

8) 14.3 - 1.24

14.30
- 1.24
13.06

9) 115.69 +21.24

115.69
+ 21.24
136.93

Class/Homework

Quiz Tomorrow

Worksheet - Multiply Decimals Slide 11& 12

Then Gr 7 Math Review on Decimals 2

The Gr 7 Math Review on Decimals3

Name : _____

Multiplying Decimals

Hundredths: L1S1

A) Find the product.

1) 0.44×0.15

2) 0.27×0.63

3) 0.07×0.59

4) 0.05×0.08

5) 0.14×0.02

6) 0.76×0.21

B) 1) Which of the following is the product of 0.95 and 0.22?

a) 0.209 b) 0.0029 c) 0.0209

2) Which of the following is the product of 0.03 and 0.39?

a) 0.1017 b) 0.0117 c) 0.1107

Printable Worksheets @ www.mathworksheets4kids.com

Name : _____

Multiplying Decimals

Hundredths by tenths: L2S1

Find the product.

1) 3.93×8.1

2) 51.2×0.04

3) 27.35×10.8

4) 12.49×7.2

5) 6.18×0.5

6) 48.76×1.3

7) 16.4×4.27

8) 0.73×3.9

Attachments

Grade 7 Math Review on Decimals 2_ Thursday.docx

Grade 7 Math Review on Decimals 3_ Friday.docx