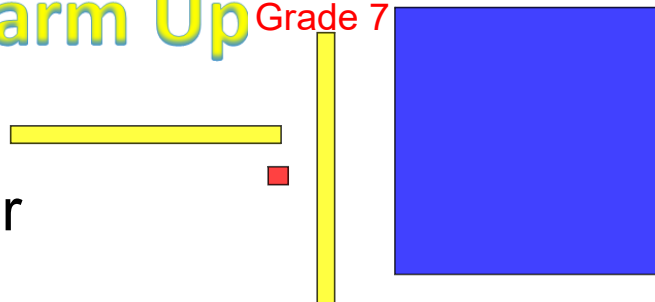


Warm Up Grade 7

Model and answer



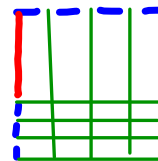
a) 2.4×1.5

b) 0.4×1.3



2 ones
14 tenths
20 hundredths

$$\begin{array}{r} 2.00 \\ + 1.40 \\ \hline 3.60 \end{array}$$



0 ones
4 tenths
12 hundredths

$$\begin{array}{r} 0.00 \\ + 0.40 \\ + 0.12 \\ \hline 0.52 \end{array}$$

Quiz tomorrow

Examples

adding decimals a) $12.36 + 0.258$

multiplying decimals a) 15.7×0.6

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

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

16 pts total

$$\begin{array}{r} 5.52 \\ \times 31.6 \\ \hline 3312 \\ 5520 \\ 165600 \\ \hline 174.432 \end{array}$$

$$\begin{array}{r} 16.0 \\ \times 7.53 \\ \hline 480 \\ 8000 \\ 112000 \\ \hline 120.480 \end{array}$$

$$\begin{array}{r} 1.44 \\ \times 5.14 \\ \hline 576 \\ 1440 \\ 72000 \\ \hline 7.4076 \end{array}$$

$$\begin{array}{r} 63.5 \\ \times 8.24 \\ \hline 2540 \\ 12700 \\ 508000 \\ \hline 523.240 \end{array}$$

$$\begin{array}{r} 90.8 \\ \times 7.28 \\ \hline 7264 \\ 18160 \\ 635600 \\ \hline 6610.24 \end{array}$$

$$\begin{array}{r} 40.6 \\ \times 8.41 \\ \hline 406 \\ 16240 \\ 324800 \\ \hline 341.446 \end{array}$$

$$\begin{array}{r} 34.7 \\ \times 54.0 \\ \hline 000 \\ 13880 \\ 173500 \\ \hline 1873.80 \end{array}$$

$$\begin{array}{r} 11.5 \\ \times 6.61 \\ \hline 115 \\ 6900 \\ 69000 \\ \hline 76.015 \end{array}$$

$$\begin{array}{r} 66.7 \\ \times 7.09 \\ \hline 6003 \\ 0000 \\ 466900 \\ \hline 472.903 \end{array}$$

4. Multiply. Use a rectangle model.

a) 4.2×3.7 $\approx 4 \times 4 = 16$

$$\begin{array}{r} 4.2 \\ \times 3.7 \\ \hline 294 \\ 1260 \\ \hline 15.54 \end{array}$$

b) 8.9×0.3 $\approx \frac{10}{3} \times \frac{1}{3} = \frac{10}{9}$

$$\begin{array}{r} 8.9 \\ \times 0.3 \\ \hline 267 \end{array}$$

c) 0.6×0.9 < 1

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

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

$\approx 30 \times 5 = 150$

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

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.

$$A = l \times w$$

$$30.5 \times 5.3$$

$$\approx 30 \times 5$$

$$150$$

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

- 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 m²

$$\begin{array}{r} 3.4 \\ \times 2.7 \\ \hline 238 \\ 680 \\ \hline 9.18 \end{array}$$

8) a) $2.7 \times 4.786 = 12.9222$

b) $12.52 \times 13.923 = 174.31596$

c) $0.986 \times 1.352 = 1.333072$

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?

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

she can drive 936.66 km on a full tank.

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

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

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

≈ \$2.50

Apples \$2.43

$$\begin{array}{r} 10.5 \\ \times 1.19 \\ \hline 945 \\ 10500 \\ 105000 \\ \hline 12.495 \end{array} \text{ or } \$12.50$$

$$\begin{array}{r} 10 \times 1.19 = 11.90 \\ 0.5 \times 1.19 = 0.60 \\ \hline 12.50 \end{array}$$

$$\begin{array}{r} 2.48 \\ \times 0.25 \\ \hline 1240 \\ 4960 \\ \hline 0.6200 \end{array}$$

$$\begin{array}{r} \frac{1}{4} \text{ of } \$2 = 0.50 \\ \frac{1}{4} \text{ of } 48¢ = 0.12 \\ \hline \$0.62 \end{array}$$

11. The product of 2 decimals is 0.36.

What might the decimals be?

Find as many answers as you can.

Homework Solutions

$$4 \times 9 = 36, \text{ so } 0.4 \times 0.9 = 0.36$$

$$2 \times 18 = 36, \text{ so } 0.2 \times 1.8 = 0.36$$

$$1 \times 36 = 36, \text{ so } 0.1 \times 3.6 = 0.36$$

$$3 \times 12 = 36, \text{ so } 0.3 \times 1.2 = 0.36$$

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.

$$\begin{array}{r} 18 \\ \times 12 \\ \hline \end{array}$$

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

$$\begin{array}{l} \text{b) } 1.8 \times 12 = 21.6 \\ 18 \times 0.12 = 2.16 \\ 0.18 \times 12 = 2.16 \\ 0.18 \times 0.12 = 0.0216 \end{array}$$

13. Take It Further

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.

Homework Solutions

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

$\approx 6 \times 2$
12

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

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

$\approx 3.5 \times 2$
7

$$\begin{array}{r} 1.234 \\ \times 0.9 \\ \hline 1106 \end{array}$$

≈ 1.234

1) 12.36×7.2

$$\begin{array}{r} 12.36 \\ \times 7.2 \\ \hline 2472 \\ 86520 \\ \hline 88992 \end{array}$$

2) 3.25×0.4

$$\begin{array}{r} 3.25 \\ \times 0.4 \\ \hline 1300 \end{array}$$

3) 1.9×2.37

$$\begin{array}{r} 2.37 \\ \times 1.9 \\ \hline 2133 \\ 2370 \\ \hline 4503 \end{array}$$

4) 14.7×6.2

$$\begin{array}{r} 14.7 \\ \times 6.2 \\ \hline 294 \\ 8820 \\ \hline 9114 \end{array}$$

5) 60.7×124

$$\begin{array}{r} 60.7 \\ \times 124 \\ \hline 2428 \\ 12140 \\ + 60700 \\ \hline 75268 \end{array}$$

6) 8×54.7

$$\begin{array}{r} 54.7 \\ \times 8 \\ \hline 4376 \end{array}$$

7) $12.7 + 0.25$

$$\begin{array}{r} 12.70 \\ + 0.25 \\ \hline 12.95 \end{array}$$

8) $14.3 - 1.24$

$$\begin{array}{r} 14.30 \\ - 1.24 \\ \hline 13.06 \end{array}$$

9) $115.69 + 21.24$

$$\begin{array}{r} 115.69 \\ + 21.24 \\ \hline 136.93 \end{array}$$

Class/Homework

Quiz Tomorrow

Worksheet - Multiply Decimals
Slide 11 & 12

Then Gr 7 Math Review on Decimals 2

The Gr 7 Math Review on Decimals 3

Attachments

Grade 7 Math Review on Decimals 2_ Thursday.docx

Grade 7 Math Review on Decimals 3_ Friday.docx