

Warm Up Grade 8

Quiz soon

Find the product

a) $2.4 \times 2.7 = \boxed{6.48}$

Handwritten multiplication of 2.4 by 2.7. The numbers are written in green. A red 'x' is to the left. A red horizontal line separates the numbers from the partial products. The first partial product is 168, with a purple dot above the 1 and a blue arrow pointing to the 8. The second partial product is 48, with an orange '+' to the left, an orange dot above the 4, and a green circle around the 8. A blue arrow points to the 8. The final product is 6.48, with an orange horizontal line above it, an orange dot above the 6, and blue arrows pointing to the 4 and 8.

b) $3.1 \times 0.3 = \boxed{0.93}$

Handwritten multiplication of 3.1 by 0.3. The numbers are written in blue. A red 'x' is to the left. A red horizontal line separates the numbers from the partial products. The first partial product is 93, with a purple dot above the 9 and a purple arrow pointing to the 3. The second partial product is 0.93, with a purple dot above the 0 and a purple arrow pointing to the 3. The final product is 0.93, with a purple horizontal line above it, a purple dot above the 0, and purple arrows pointing to the 9 and 3.

Homework Solutions

4. Multiply. Use a rectangle model.

a) 4.2×3.7

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

b) 8.9×0.3

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

c) 0.6×0.9

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

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.

$$A = l \times w$$

$$30.5 \times 5.3$$

$$\approx 30 \times 5 \\ 150$$

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

Homework Solutions

7) Area = length x width
= 3.4m x 2.7m
= 9.18 m²

$$\begin{array}{r} \overset{1}{3.4} \\ \times 2.7 \\ \hline 238 \\ 680 \\ \hline 9.18 \end{array}$$

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?

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

she can
drive
936.66 km on a
full tank.

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

In the city she
can drive 852.24 km

Homework Solutions

10. Find the cost of each item at the Farmers' Market.

Which strategy will you use? Justify your choice.

a) 4kg of apples at \$0.95/kg

b) 3.2 kg of potatoes at \$1.19/kg

c) 2.5 kg of herbs at \$2.48/kg

$$\begin{array}{r} ^2 \\ \text{a) } 0.95 \\ \times 4 \\ \hline 3.80 \end{array}$$

$$\begin{array}{r} ^2 \\ \text{b) } 1.19 \\ \times 3.2 \\ \hline 1 \\ 238 \\ + 3570 \\ \hline 3808 \\ = \$3.81 \end{array}$$

$$\begin{array}{r} \text{c) } 2.48 \\ \times 2.5 \\ \hline 1240 \\ 4960 \\ \hline 6200 \\ = \$6.20 \end{array}$$

12. a) Multiply 18×12 .

b) Use only the result from part a and estimation.

Find each product.

i) $1.8 \times 12 = 21.6$

Explain your strategies.

$$\begin{array}{r} \downarrow \downarrow \\ 216 \\ \uparrow \uparrow \end{array}$$

$$\begin{array}{r} \downarrow \downarrow \\ 216 \\ \uparrow \uparrow \end{array}$$

ii) 18×0.12

$$\begin{array}{r} \downarrow \downarrow \downarrow \downarrow \\ .0216 \\ \uparrow \uparrow \uparrow \uparrow \end{array}$$

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

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

$$\text{b) } 1.8 \times 12 = 21.6$$

$$18 \times 0.12 = 2.16$$

$$0.18 \times 12 = 2.16$$

$$0.18 \times 0.12 = 0.0216$$

You multiply decimals the same way you multiply whole, but you have to remember to SEput the decimal in the proper position in your answer.

Try the following:

(a) 42.7×0.6

$$\begin{array}{r} 42.7 \\ \times 0.6 \\ \hline 25.62 \end{array}$$

(b) 1.23×4.2

$$\begin{array}{r} 1.23 \\ \times 4.2 \\ \hline 246 \\ +4920 \\ \hline 5.166 \end{array}$$

c) 21.6×5.56

$$\begin{array}{r} 21.6 \\ \times 5.56 \\ \hline 1296 \\ 10800 \\ +108000 \\ \hline 120.096 \end{array}$$

Class/Homework

Finish

Worksheet from Yesterday & The
BOOKLETS from Previous days.

Quiz ????

Then do the following on your own paper

1) 12.36×7.2 2) 3.25×0.4 3) 1.9×2.37 4) 14.7×6.2

5) 60.7×124

6) 8×54.7 7) $12.7 + 0.25$ 8) $14.3 - 1.24$

Extra sheets on my desk if more
is needed.

9) $115.69 + 21.24$

Another Extra WS

$$\begin{array}{r}
 55.2 \\
 \times 31.6 \\
 \hline
 3312 \\
 5520 \\
 165600 \\
 \hline
 174432
 \end{array}$$

$$\begin{array}{r}
 160 \\
 \times 75.3 \\
 \hline
 480 \\
 8000 \\
 112000 \\
 \hline
 120480
 \end{array}$$

$$\begin{array}{r}
 144 \\
 \times 51.4 \\
 \hline
 576 \\
 1440 \\
 72000 \\
 \hline
 74016
 \end{array}$$

$$\begin{array}{r}
 63.5 \\
 \times 82.4 \\
 \hline
 2540 \\
 12700 \\
 508000 \\
 \hline
 523240
 \end{array}$$

$$\begin{array}{r}
 908 \\
 \times 72.8 \\
 \hline
 7264 \\
 18160 \\
 635600 \\
 \hline
 661024
 \end{array}$$

$$\begin{array}{r}
 40.6 \\
 \times 84.1 \\
 \hline
 406 \\
 16240 \\
 324800 \\
 \hline
 34146
 \end{array}$$

$$\begin{array}{r}
 347 \\
 \times 54.0 \\
 \hline
 000 \\
 13880 \\
 173500 \\
 \hline
 187380
 \end{array}$$

$$\begin{array}{r}
 115 \\
 \times 66.1 \\
 \hline
 115 \\
 6900 \\
 69000 \\
 \hline
 76015
 \end{array}$$

$$\begin{array}{r}
 667 \\
 \times 70.9 \\
 \hline
 6003 \\
 0000 \\
 466900 \\
 \hline
 472903
 \end{array}$$

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

1.9
x 2.37

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

8
x 54.7

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 -

115.69
+ 21.24

136.93

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4. Multiply. Use a rectangle model.

a) 4.2×3.7

b) 8.9×0.3

c) 0.6×0.9

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.



6. Multiply. Describe any patterns you see.

a) 8.36×10

8.36×100

8.36×1000

$8.36 \times 10\,000$

b) 8.36×0.1

8.36×0.01

8.36×0.001

8.36×0.0001

- 7. Assessment Focus** An area rug is rectangular. Its dimensions are 3.4 m by 2.7 m. Show different strategies you can use to find the area of the rug. Which strategy is best? Justify your answer.



- 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?

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

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

Extra Sheet If Needed

APPLICATIONS AND EXERCISES

● Copy and place the decimal point in the product.

- a. $46 \times 1.8 = 828$
- b. $43.5 \times 0.75 = 32625$
- c. $0.18 \times 0.07 = 126$
- d. $3.14 \times 12 = 3768$
- e. $0.09 \times 0.11 = 99$
- f. $396 \times 2.6 = 10296$
- g. $0.003 \times 0.5 = 15$

2. Multiply.

- a. 3×4.32
- b. 0.75×0.8
- c. 6×1.56
- d. 0.94×6.006
- e. 1.02×0.77
- f. 45×4.92
- g. 2.096×80.5
- h. 0.06×0.94
- i. 0.007×0.71
- j. 79.3×1.02

3. Brad bought 2.5 kg of nails at \$1.24/kg. How much did he pay for them?

4. A sheet of paper is 0.3175 mm thick. How high would a pile of 5000 sheets be?

5. Are the products reasonable? Calculate any that are not.

- a. $5.45 \times 8.4 = 457.8$
- b. $284 \times 0.95 = 26.98$
- c. $29.5 \times 0.502 = 1.4809$

6. Find the products. Copy and complete the Magic Square. What is the Magic Sum?

- a. 0.8×5
- b. 70×0.2
- c. $3.75 \times 8 \times 0.4$
- d. 0.003×6000
- e. 0.01×1000
- f. $50 \times 0.08 \times 0.5$
- g. 0.5×16
- h. 2.4×2.5
- i. 128×0.125

a.	b.	c.
d.	e.	f.
g.	h.	i.

7. Estimate, then calculate. Round the product to the nearest tenth.



- a. 38.1×0.93
- b. 1.58×48.2
- c. 40.02×30.3

8. Estimate, then calculate. Round the product to the nearest hundredth.



- a. 2.14×0.74
- b. 5.74×30.9
- c. 0.67×0.894

9. Jean bought 32.5 L of unleaded gasoline.

- a. How much did it cost? Round the amount to the nearest cent.
- b. How much change did she receive from a \$20 bill?

Regular
53.9¢/L
Unleaded
56.4¢/L
Super Unleaded
58.7¢/L

1. Multiply. Look for a pattern.

- a. 1.2×10
- b. 0.25×10
- 1.2×1
- 0.25×1
- 1.2×0.1
- 0.25×0.1
- 1.2×0.01
- 0.25×0.01

2. How many decimal places are in the product?

- a. 4.13×0.3
- b. 0.7×0.0009
- c. 18×206
- d. 7.26×6.1

3. Copy and place the decimal point in the product.

- a. $1.98 \times 73.6 = 145728$
- b. $0.713 \times 0.16 = 11408$
- c. $0.065 \times 0.9 = 585$
- d. $0.064 \times 0.2 = 128$
- e. $5.06 \times 3.71 = 187726$
- f. $9 \times 0.011 = 99$