



## Warm Up Grade 7

$$4.81 - 0.373$$

1) A student subtracted 0.373 from 4.81 and got the difference of 0.108. (Add/subtract decimals → line up the decimal)

a) What mistake did the student make and find the actual answer?

$$\begin{array}{r} 4.810 \\ - 0.373 \\ \hline 4.437 \end{array}$$

$$\begin{array}{r} 4.81 \\ - 373 \\ \hline 108 \end{array}$$

Did not line up the decimal.

Let's Review

How to Multiply Whole Numbers

1)  $53 \times 9$

$$\begin{array}{r} \overset{2}{5} \overset{3}{3} \\ \times \quad \overset{1}{9} \\ \hline 477 \end{array}$$

2)  $93 \times 3$

$$\begin{array}{r} \overset{1}{9} \overset{2}{3} \\ \times \quad \overset{1}{3} \\ \hline 279 \end{array}$$

3)  $89 \times 5$

$$\begin{array}{r} \overset{4}{8} \overset{3}{9} \\ \times \quad \overset{1}{5} \\ \hline 445 \end{array}$$

4)  $90 \times 4$

$$\begin{array}{r} \overset{1}{9} \overset{2}{0} \\ \times \quad \overset{1}{4} \\ \hline 360 \end{array}$$

Answers

Let's Review

How to Multiply 2 digit by 2 digit

$$\begin{array}{r}
 1) \quad 82 \times 41 \\
 \begin{array}{r}
 \overset{\cdot}{8}2 \\
 \times \overset{\cdot}{4}1 \\
 \hline
 \overset{\cdot}{8}2 \\
 + \overset{\cdot}{3}280 \\
 \hline
 3362
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 2) \quad 44 \times 42 \\
 \begin{array}{r}
 \overset{\cdot}{4}4 \\
 \times \overset{\cdot}{4}2 \\
 \hline
 \overset{\cdot}{8}8 \\
 + \overset{\cdot}{1}760 \\
 \hline
 1848
 \end{array}
 \end{array}$$

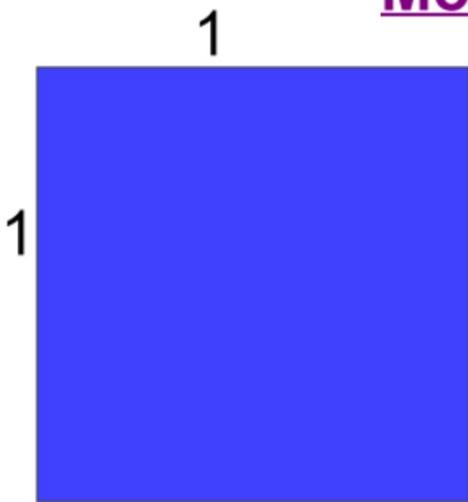
$$\begin{array}{r}
 3) \quad 25 \times 10 \\
 \begin{array}{r}
 \overset{\cdot}{2}5 \\
 \times \overset{\cdot}{1}0 \\
 \hline
 \overset{\cdot}{0}0 \\
 + \overset{\cdot}{2}50 \\
 \hline
 250
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 4) \quad 93 \times 86 \\
 \begin{array}{r}
 \overset{\cdot}{9}3 \\
 \times \overset{\cdot}{8}6 \\
 \hline
 \overset{\cdot}{5}58 \\
 + \overset{\cdot}{7}440 \\
 \hline
 7998
 \end{array}
 \end{array}$$

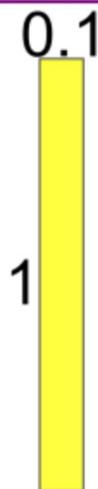
Answers

## Models for Decimal

with dimensions



will represent  
ones  
1



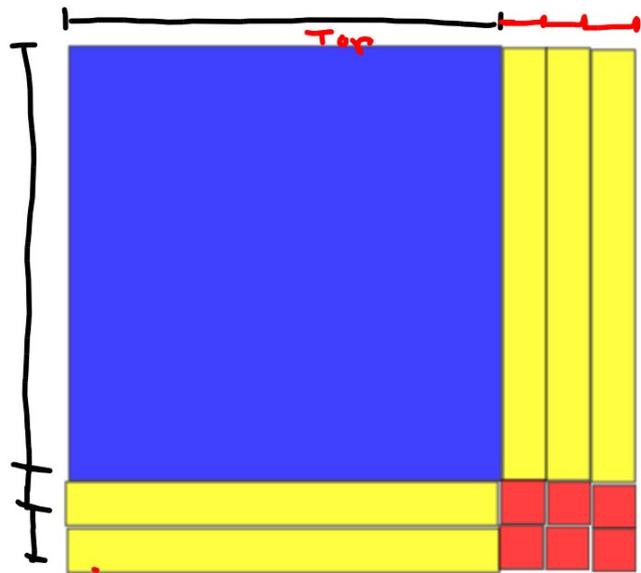
will represent  
tenths  
0.1



will represent  
hundredths  
0.01



What multiplication sentence is being shown by the diagram? read top then side

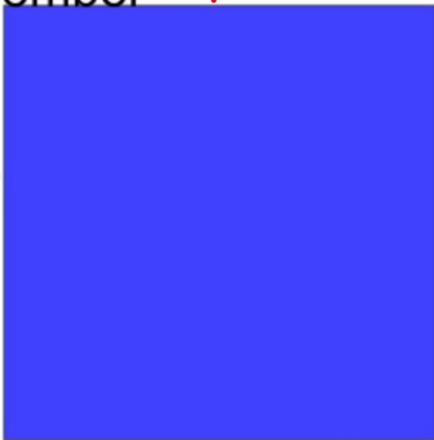


$$\begin{array}{r} 1.3 \\ \times 1.2 \\ \hline \end{array}$$

Top                  Side

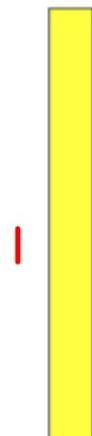
<u>1</u>	ones	1.00
<u>5</u>	tenths	0.50
<u>6</u>	hundredths	+ 0.06
		1.56

remember 1



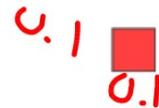
represent 1

0.1

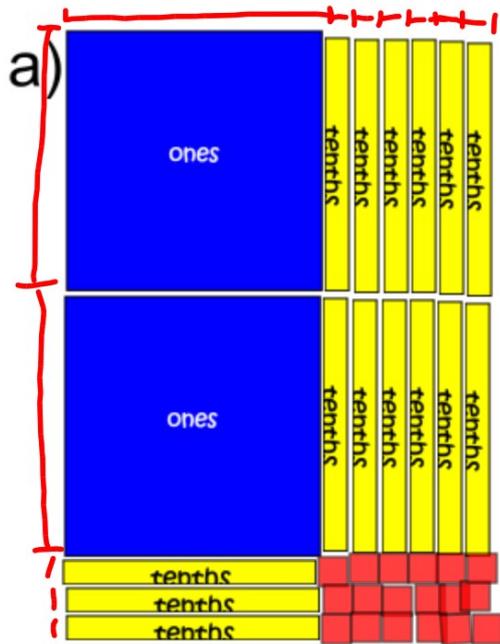


represent tenth

$$1.3 \times 1.2 = 1.56$$



represents hundredth



list the ones, tenths & hundredths

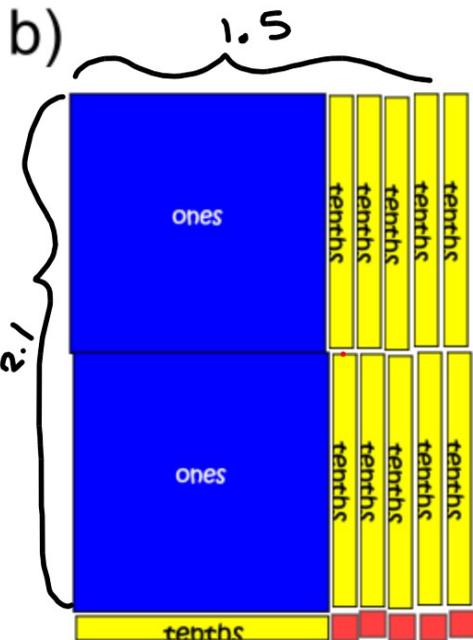
$$\begin{array}{r}
 \underline{2} \text{ ones} = 2.00 \\
 \underline{15} \text{ tenths} = 1.50 \\
 \underline{18} \text{ hundredths} = + 0.18 \\
 \hline
 \text{sum } 3.68
 \end{array}$$

show multiplication the regular way

$$1.6 \times 2.3 \rightarrow 16 \times 23$$

$$\begin{array}{r}
 \phantom{0}16 \\
 \times 23 \\
 \hline
 48 \\
 320 \\
 \hline
 368
 \end{array}$$

$$\text{SO } \begin{array}{r}
 1.6 \\
 \times 2.3 \\
 \hline
 7.68
 \end{array}$$



$$1.5 \times 2.1$$

$$\begin{array}{r}
 \underline{2} \text{ ones} = 2.00 \\
 \underline{11} \text{ tenths} = 1.10 \\
 \underline{5} \text{ hundredths} = + 0.05 \\
 \hline
 \text{sum } 3.15
 \end{array}$$

show multiplication the regular way

3-2

3.4

ones	ones	ones	tenths	tenths
ones	ones	ones	tenths	tenths
ones	ones	ones	tenths	tenths
tenths	tenths	tenths		
tenths	tenths	tenths		
tenths	tenths	tenths		
tenths	tenths	tenths		

3.2 × 3.4

9 ones = 9.00

18 tenths = 1.80

8 hundredths = 0.08

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sum 10.88

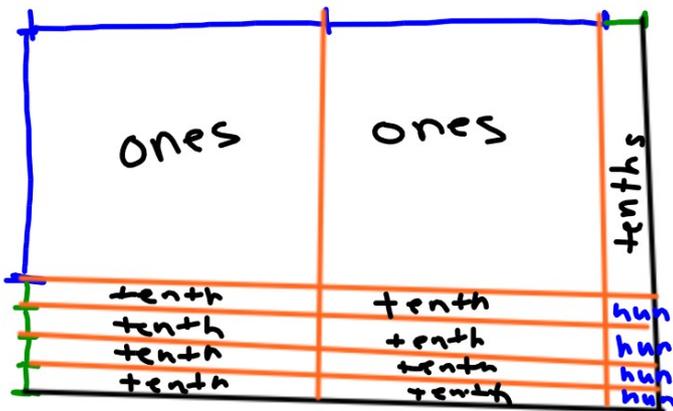
DO IT OUT NORMALLY

$$\begin{array}{r}
 32 \\
 \times 34 \\
 \hline
 128 \\
 960 \\
 \hline
 1088
 \end{array}$$

$$\begin{array}{r}
 3.2 \\
 \times 3.4 \\
 \hline
 10.88
 \end{array}$$

Model the following multiplication

$$\begin{array}{c}
 \text{Top} \quad \text{Side} \\
 2.1 \times 1.4 \\
 \text{long} \quad \text{short} \quad \text{short}
 \end{array}$$



$$\begin{array}{r}
 2 \text{ ones} \quad 2.00 \\
 9 \text{ tenths} \quad 0.90 \\
 4 \text{ hundredths} \quad 0.04 \\
 \hline
 2.94
 \end{array}$$

Model the following multiplication

$$1.2 \times 0.4$$