

Name: _____

UNDERSTANDING PLACE VALUE:

MULTIPLYING & DIVIDING BY 10 AND 100



Professor Place Value needs your help with these calculations!

Multiplying by 10

First, lets address a common misconception:

Steve thinks that to multiply by 10, you just add a 0 to the number.
For example, he says $56 \times 10 = 560$.

Sarah explains that this only works for **whole numbers**. She says,
"When multiplying by 10, the digits move one place to the left."
For example, 7.8×10 becomes **78** not 7.80.



- $4 \times 10 = \underline{\quad}$
- $8 \times 10 = \underline{\quad}$
- $12 \times 10 = \underline{\quad}$
- $50 \times 10 = \underline{\quad}$
- $27 \times 10 = \underline{\quad}$
- $3.5 \times 10 = \underline{\quad}$
- $6.4 \times 10 = \underline{\quad}$
- $8.1 \times 10 = \underline{\quad}$
- $4.2 \times 10 = \underline{\quad}$
- $9.3 \times 10 = \underline{\quad}$

- $1.7 \times 10 = \underline{\quad}$
- $0.8 \times 10 = \underline{\quad}$
- $2.9 \times 10 = \underline{\quad}$
- $7.6 \times 10 = \underline{\quad}$
- $5.5 \times 10 = \underline{\quad}$
- $0.25 \times 10 = \underline{\quad}$
- $0.34 \times 10 = \underline{\quad}$
- $1.25 \times 10 = \underline{\quad}$
- $0.75 \times 10 = \underline{\quad}$
- $3.14 \times 10 = \underline{\quad}$

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Multiplying by 100

Remember Sarah and Steve from multiplying by 10? This time, the rule is slightly different.

When multiplying by 100, you move the digits two places to the left.



- $4 \times 100 = \underline{\quad}$
- $8 \times 100 = \underline{\quad}$
- $12 \times 100 = \underline{\quad}$
- $50 \times 100 = \underline{\quad}$
- $27 \times 100 = \underline{\quad}$
- $3.5 \times 100 = \underline{\quad}$
- $6.4 \times 100 = \underline{\quad}$
- $8.1 \times 100 = \underline{\quad}$
- $4.2 \times 100 = \underline{\quad}$
- $9.3 \times 100 = \underline{\quad}$



- $1.7 \times 100 = \underline{\quad}$
- $0.8 \times 100 = \underline{\quad}$
- $2.9 \times 100 = \underline{\quad}$
- $7.6 \times 100 = \underline{\quad}$
- $5.5 \times 100 = \underline{\quad}$
- $0.25 \times 100 = \underline{\quad}$
- $0.34 \times 100 = \underline{\quad}$
- $1.25 \times 100 = \underline{\quad}$
- $0.75 \times 100 = \underline{\quad}$
- $3.14 \times 100 = \underline{\quad}$

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UNDERSTANDING PLACE VALUE:

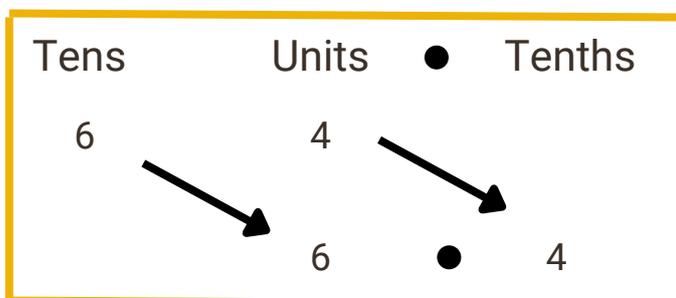
MULTIPLYING & DIVIDING BY 10 AND 100



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Dividing by 10

When dividing a number by 10, all the digits move one place to the right. Eg
 $64 \div 10 = 6.4$



- $650 \div 10 = \underline{\quad}$
- $420 \div 10 = \underline{\quad}$
- $900 \div 10 = \underline{\quad}$
- $310 \div 10 = \underline{\quad}$
- $150 \div 10 = \underline{\quad}$
- $75 \div 10 = \underline{\quad}$
- $64 \div 10 = \underline{\quad}$
- $32 \div 10 = \underline{\quad}$
- $18 \div 10 = \underline{\quad}$
- $56 \div 10 = \underline{\quad}$



- $41 \div 10 = \underline{\quad}$
- $29 \div 10 = \underline{\quad}$
- $93 \div 10 = \underline{\quad}$
- $54 \div 10 = \underline{\quad}$
- $27 \div 10 = \underline{\quad}$
- $43.2 \div 10 = \underline{\quad}$
- $84.6 \div 10 = \underline{\quad}$
- $924.8 \div 10 = \underline{\quad}$
- $742.1 \div 10 = \underline{\quad}$
- $5.9 \div 10 = \underline{\quad}$

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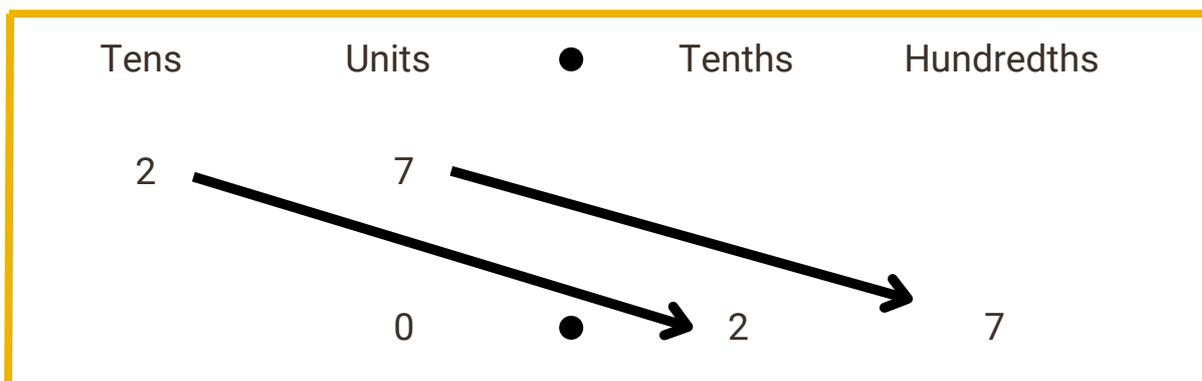
UNDERSTANDING PLACE VALUE: MULTIPLYING & DIVIDING BY 10 AND 100



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with these calculations!

Dividing by 100

When dividing a number by 100, all the digits move two place to the right. Eg
 $27 \div 100 = 0.27$



- $800 \div 100 = \underline{\quad}$
- $400 \div 100 = \underline{\quad}$
- $900 \div 100 = \underline{\quad}$
- $200 \div 100 = \underline{\quad}$
- $600 \div 100 = \underline{\quad}$
- $75 \div 100 = \underline{\quad}$
- $64 \div 100 = \underline{\quad}$
- $32 \div 100 = \underline{\quad}$
- $18 \div 100 = \underline{\quad}$
- $56 \div 100 = \underline{\quad}$



- $41 \div 100 = \underline{\quad}$
- $29 \div 100 = \underline{\quad}$
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- $27 \div 100 = \underline{\quad}$
- $43.2 \div 100 = \underline{\quad}$
- $84.6 \div 100 = \underline{\quad}$
- $732.1 \div 100 = \underline{\quad}$
- $5.9 \div 100 = \underline{\quad}$
- $300.6 \div 100 = \underline{\quad}$