


Use Place Value to Multiply/Divide by 10's & to work out Simple Calculations - iNA2

 Do all of iNA2
without a calculator!

To multiply **whole numbers** just **add noughts**:

To $\times 10$, add **one** nought - '0'

To $\times 100$, add **two** noughts - '00'

To $\times 1000$, add **three** noughts - '000'

Example $167 \times 10 = 1670$

Example $50 \times 100 = 5000$

Example $540 \times 1000 = 540000$

To multiply **decimals** move the **decimal point** to the **right** adding extra noughts as required:

To $\times 10$, move decimal point **one** to the **right**

Example $16.7 \times 10 = 167$

To $\times 100$, move decimal point **two** to the **right**

Example $1.71 \times 100 = 171$

To $\times 1000$, move decimal point **three** to the **right**

Example $0.357 \times 1000 = 357$

Note: Add **extra noughts** if required

Example

1.7×1000

Solution

$1.7 \times 1000 = 1700$

1.7
1700.

Your Turn!!

Calculate a) 136×100 b) 1.36×10 c) 0.036×100 d) 1.3×1000

To divide **decimals** move the **decimal point** to the **left** adding extra noughts as required:

To $\div 10$, move decimal point **one** to the **left**

Example $67 \div 10 = 6.7$

To $\div 100$, move decimal point **two** to the **left**

Example $754 \div 100 = 7.54$

To $\div 1000$, move decimal point **three** to the **left**

Example $15000 \div 1000 = 15$

Note: Add **extra noughts** if required

Example

$7.4 \div 1000$

Solution

$7.4 \div 1000 = 0.0074$

Also Note: Noughts at the end after a decimal point can be dropped; so 6.010 can be better written as 6.01

7.4
.0074

Your Turn!!

Calculate e) $13600 \div 100$ f) $36700 \div 100$ g) $1.36 \div 10$ h) $1.3 \div 1000$

Reminder:

These examples move decimal points around. But where

is the decimal point for the number 67? It is helpful to write the number '67' as '67.' Similarly '754' can be written as '754.' Now it is clear where the decimal point starts!

Simple Calculations

Example

Given that $256 \times 125 = 32000$

Calculate a) 2.56×12.5

The decimal point of the 256 has moved 2 places to the left.

The decimal point of the 125 has moved 1 place to the left.

The decimal point in the answer will be 3 places to the left.

b) 0.256×1250

The decimal point of the 256 has moved 3 places to the left.

The decimal point of the 125 has moved 1 place to the right.

The decimal point in the answer will be 2 places to the left.

Solution

a) $2.56 \times 12.5 = 32$

b) $0.256 \times 1250 = 320$

Your Turn!!

Given that $123 \times 99 = 12177$

Calculate i) 12.3×9.9

j) 12300×9.9

Reminder:

This example sees the decimal points as having moved and so it is helpful to recognise '256' as '256.' and similarly '125' as '125.' Now it is clear where the decimal point starts!

RAPID 'ACID' TEST – Blank out the page above before answering these!



Calculate 1. 12.7×1000 2. $12.7 \div 10$ 3. $1.27 \div 1000$

4. Given that $123 \times 321 = 39483$, calculate a) 1230×32100 b) 12.3×3.21 c) 12.3×32100