

Maths Star

Multiply & Divide Decimals by 10,100,1000

When a question asks you to multiply or divide a decimal by a multiple of 10, it is simply a case of moving the number left or right so that the decimal point appears in a different position.

When you multiply by 10, the number gets ten times bigger, “budging” the number one place further left (2 places when we multiply by 100, etc):

$$\begin{array}{l} \text{H T U . t h th} \\ 1 . 3 2 \\ 1 3 . 2 \quad \times 10 \end{array}$$

$$\begin{array}{l} \text{H T U . t h th} \\ 1 . 3 2 \\ 1 3 2 . 0 \quad \times 100 \end{array}$$

When dividing, it simply “budges” the number to the right instead, as the number gets smaller:

$$\begin{array}{l} \text{H T U . t h th} \\ 4 7 . 3 \\ 4 . 7 3 \quad \div 10 \end{array}$$

$$\begin{array}{l} \text{H T U . t h th} \\ 4 7 . 3 \\ 0 . 4 7 3 \quad \div 100 \end{array}$$

Try it yourself:

- | | | | |
|---|--|--|--|
| 1) 2.7×10
$= 27.0$ or 27 | 2) 3.41×10
$= 34.1$ | 3) 72.4×10
$= 724.0$ or 724 | 4) 0.218×10
$= 2.18$ (number moves
1 to the left) |
| 5) 5.8×100
$= 580.0$ or 580 | 6) 6.24×100
$= 624.0$ or 624 | 7) 89.1×100
$= 8910.0$ or 8910 | 8) 0.034×100
$= 3.4$ (number moves
2 to the left) |
| 9) $7.3 \div 10$
$= 0.73$ | 10) $35.7 \div 10$
$= 3.57$ | 11) $4.22 \div 10$
$= 0.422$ | 12) $0.28 \div 10$
$= 0.028$ (number moves
1 to the right) |
| 13) $9.1 \div 100$
$= 0.091$ | 14) $73.2 \div 100$
$= 0.732$ | 15) $1.25 \div 100$
$= 0.0125$ | 16) $0.97 \div 100$
$= 0.0097$ (number moves
2 to the right) |