

A X MULTIPLICATION e.g. 62.9×0.7

*1) Write out the question,
underlining decimal places
(figures after the point)

$$62.\underline{9} \times 0.\underline{7}$$

*2) Set out as a multiplication
but WITHOUT THE POINTS.
Miss out any LEFT-HAND
noughts.

$$\begin{array}{r} 629 \\ \times \quad 7 \\ \hline \end{array}$$

*3) Work out

$$\begin{array}{r} 629 \\ \times \quad 7 \\ \hline 4403 \end{array}$$

*4) Look back at the question
and count the decimal places.
Your answer should have the
SAME NUMBER OF DECIMAL
PLACES as the question.

$$\begin{array}{r} 62.\underline{9} \times 0.\underline{7} \\ = 44.\underline{03} \end{array}$$

B Long multiplication works out e.g. $2.\underline{78} \times 4.\underline{2}$
just the same way

$$\begin{array}{r} 278 \\ \times \quad 42 \\ \hline 556 \\ 1112 \\ \hline 11676 \end{array}$$

So $2.\underline{78} \times 4.\underline{2} = 11.\underline{676}$

C Fill up to the point with noughts
if necessary

e.g. $0.\underline{16} \times 0.\underline{3}$

$$\begin{array}{r} 16 \\ \times \quad 3 \\ \hline 48 \end{array}$$

so answer is $0.\underline{048}$

D It is better to write 0.942 than .942
The nought helps to show where the point is.

a Decimal places have been underlined to help you

- | | | |
|---|---|--|
| 1) $6.\underline{2} \times 3$ | 6) $3.\underline{44} \times 0.\underline{7}$ | 11) $5.\underline{19} \times 0.\underline{4}$ |
| 2) $3.\underline{8} \times 0.\underline{2}$ | 7) $2.\underline{06} \times 0.\underline{8}$ | 12) $2.\underline{3} \times 11$ |
| 3) $9.\underline{2} \times 4$ | 8) $1.\underline{25} \times 2$ | 13) $92.\underline{3} \times 0.\underline{07}$ |
| 4) $5.\underline{7} \times 0.\underline{5}$ | 9) $39.\underline{2} \times 0.\underline{3}$ | 14) $4.\underline{8} \times 2.\underline{1}$ |
| 5) $2.\underline{35} \times 6$ | 10) $4.\underline{7} \times 0.\underline{05}$ | 15) $16.\underline{75} \times 0.\underline{6}$ |

b Remember to fill up to the point with noughts if necessary

- | | | |
|-----------------------|------------------------|--------------------------|
| 1) 2.43×0.9 | 6) 1.236×0.04 | 11) 0.175×0.06 |
| 2) 1.42×0.03 | 7) 0.08×0.5 | 12) 54.4×1.8 |
| 3) 2.7×3.4 | 8) 3.91×24 | 13) 0.38×0.14 |
| 4) 7.45×0.27 | 9) 62.05×3.6 | 14) 0.085×0.062 |
| 5) 0.62×5.5 | 10) 2.51×67 | 15) 93.7×0.81 |

- c**
- | | | |
|-----------------------|-------------------------|--------------------------|
| 1) 5.72×0.8 | 6) 0.68×29 | 11) 7.77×0.55 |
| 2) 6.47×2.3 | 7) 1.052×9.6 | 12) 0.042×63 |
| 3) 2.07×1.06 | 8) 67.5×0.08 | 13) 613×400 |
| 4) 9.9×9.9 | 9) 0.329×0.2 | 14) 2.08×1.35 |
| 5) 0.28×0.3 | 10) 0.008×0.09 | 15) 343.4×0.061 |

- d**
- | | |
|--------------------------|----------------------------|
| 1) Multiply 24.8 by 6 | 6) Multiply 7.56 by 0.21 |
| 2) Multiply 6.9 by 3.2 | 7) Multiply 2.22 by 7.3 |
| 3) Multiply 2.075 by 8 | 8) Multiply 0.59 by 82 |
| 4) Multiply 5.15 by 0.05 | 9) Multiply 0.27 by 0.004 |
| 5) Multiply 94 by 0.1 | 10) Multiply 4.06 by 3.002 |
- 11) Find the product of 1.023 and 0.97
12) Find the product of 1.55 and 7.4
13) Find the product of 0.69 and 0.36
14) Find the product of 7.5 and 0.0003
15) Find the product of 0.28 and 0.28

A \div DIVISION by a whole number

e.g. $7.14 \div 3$

*Keep the point in the ANSWER above the point in the question

$$\begin{array}{r} 3 \overline{) 7.14} \\ \underline{2.38} \\ 3 \overline{) 7.14} \end{array}$$

B RUNNING OUT OF NUMBERS

e.g. (1) $24.3 \div 5$

*1) Do NOT put remainders at the end of a decimal division

$$\begin{array}{r} 4.8 \text{ ???} \\ 5 \overline{) 24.3} \end{array}$$

*2) ADD MORE NOUGHTS (as many as you need) and keep going

$$\begin{array}{r} 4.86 \\ 5 \overline{) 24.30} \end{array}$$

e.g (2) $2.9 \div 8$

$$\begin{array}{r} 0.3 \text{ ???} \\ 8 \overline{) 2.9} \end{array}$$

$$\begin{array}{r} 0.3625 \\ 8 \overline{) 2.9000} \end{array}$$

C RECURRING DECIMALS (Decimals which go on the same way for ever).

e.g. (1) $0.47 \div 3$

$$\begin{array}{r} 0.1566666666 \text{ etc.} \\ 3 \overline{) 0.4700000000} \end{array}$$

The 6 goes on for ever, so write $0.15\dot{6}$

e.g. (2) $6.43 \div 11$

$$\begin{array}{r} 0.58454545454 \\ 11 \overline{) 6.4300000000} \end{array}$$

The 45 goes on for ever, so write $0.58\dot{4}\dot{5}$

a

1) $5.22 \div 3$	6) $58.3 \div 11$	11) $6.72 \div 24$
2) $742.5 \div 5$	7) $11.12 \div 4$	12) $446.5 \div 19$
3) $0.516 \div 2$	8) $0.048 \div 6$	13) $0.1974 \div 21$
4) $48.3 \div 7$	9) $3.384 \div 9$	14) $10.8 \div 12$
5) $3.15 \div 3$	10) $575.2 \div 8$	15) $1.2062 \div 37$

b Remember to add NOUGHTS if you run out of numbers

1) $23.4 \div 5$	6) $0.98 \div 5$	11) $19.9 \div 16$
2) $9.81 \div 6$	7) $33.3 \div 2$	12) $5.1 \div 12$
3) $0.117 \div 2$	8) $35.1 \div 8$	13) $90.4 \div 25$
4) $9.7 \div 8$	9) $2.97 \div 6$	14) $0.402 \div 24$
5) $51.0 \div 4$	10) $72.9 \div 4$	15) $6.3 \div 15$

c The answers to these will be RECURRING DECIMALS

1) $22.3 \div 3$	6) $100.6 \div 6$	11) $44 \div 3$
2) $14.6 \div 6$	7) $5.79 \div 11$	12) $0.94 \div 11$
3) $6.84 \div 11$	8) $0.885 \div 9$	13) $100.0 \div 18$
4) $2.2 \div 9$	9) $2.0 \div 3$	14) $36.7 \div 33$
5) $5.6 \div 3$	10) $31.6 \div 9$	15) $23.2 \div 7$

d Try these (different sorts jumbled up)

1) $82.5 \div 3$	6) $54.3 \div 8$	11) $49.5 \div 11$
2) $9.87 \div 2$	7) $7.6 \div 6$	12) $35.0 \div 12$
3) $5.2 \div 11$	8) $3.36 \div 7$	13) $36.6 \div 15$
4) $0.0124 \div 8$	9) $0.69 \div 6$	14) $105 \div 27$
5) $3.002 \div 5$	10) $6.1 \div 9$	15) $0.343 \div 14$