4 Rules (Decimals) (non-calculator)

Starter

1. **(Review of Y7 material)** Without a calculator find the value of:
(a) 15.89 + 7.4 (b) 62.4 — 16.83

Working: Make sure the decimal points are above each other.

(a)
$$\begin{array}{r} 15.89 \\ +7.4 \\ \hline 23.29 \end{array}$$

(b) Put a zero to the right of the 4

$$\begin{array}{r} 62.40 \\ -16.83 \\ \hline 45.57 \end{array}$$

2. **(Review of Y7 material)** Without a calculator find the value of:
(a) 16.4×5.7 (b) 4.60×3.8 (c) $7.95 \div 0.6$

N.B. If you've forgotten how to multiple decimals, click here.

N.B. If you've forgotten how to divide by a decimal, click here.

Working: (a) To start with ignore the decimal points and do long multiplication

$$\begin{array}{r} 164 \\ \times\ 57 \\ \hline 1148 \\ +820 \\ \hline 9348 \end{array}$$

$16.4 \times 5.7 \approx 16 \times 6 = 96$

Therefore, the answer is 93.48

(b) The zero after the 6 in 4.60 is not needed so remove it.

$$\begin{array}{r} 46 \\ \times\ 38 \\ \hline 368 \\ +138 \\ \hline 1748 \end{array}$$

$4.60 \times 3.8 \approx 5 \times 4 = 20$

Therefore, the answer is 17.48

(c) Since the divisor (0.6) is a decimal, multiply it by 10 to make it an integer (a whole number).
If we multiply 0.6 by 10 we also need to multiply 7.95 by 10.
So $7.95 \div 0.6 \equiv 79.5 \div 6$

$$\begin{array}{r} 13.25 \\ 6\overline{)79.5} \\ 6 \\ \hline 19 \\ 18 \\ \hline 15 \\ 12 \\ \hline 30 \\ 30 \\ \hline 0 \end{array}$$

The answer is 13.25

E.g. 1 Find: (a) $64.8 \div 0.4$ (b) 8.67×4.9 (c) $10.395 \div 4.5$

Working: (a) $64.8 \div 0.4 \equiv 648 \div 4$

$$\begin{array}{r} 162 \\ 4\overline{)648} \\ \underline{4} \\ 24 \\ \underline{24} \\ 08 \\ \underline{8} \\ 0 \end{array}$$

Answer is 162

(b)
$$\begin{array}{r} 867 \\ \times\ 49 \\ \hline 7803 \\ +3468 \\ \hline 42483 \end{array}$$

$8.67 \times 4.9 \approx 9 \times 5 = 45$

The answer is 42.483.

(c) $10.395 \div 4.5 \equiv 103.95 \div 45$

$$\begin{array}{r} 2.31 \\ 45\overline{)103.95} \\ \underline{90} \\ 139 \\ \underline{135} \\ 45 \\ \underline{45} \\ 0 \end{array}$$

Answer is 2.31

Video: Multiplying decimals
Video: Dividing by a decimal

Solutions to Starter and E.g.s

Exercise
p65 Ex 4.2 Qu 1ace, 2ace, 5-8