

Year 5 Multiplication and division

Product	Multiply
Quotient	Lots of
Divisor	Column
Dividend	Place value
Operation	Digit
Equation	Remainder
Equal to	Multiples
Digit	Factor
Inverse	Prime
Symbol	Divisible

Multiply numbers up to 4 digits by a two-digit number

$$\begin{array}{r}
 \quad \quad \quad x \quad 32 \\
 \quad \quad \quad \quad 45 \\
 \hline
 \quad 160 \\
 1280 \\
 \hline
 1440
 \end{array}$$

Long multiplication lets us multi-digit number together. This calculation is the same as doing $32 \times 5 = 160$ and $32 \times 40 = 1280$, then adding them together to make 1440.

The green zero is a placeholder which shows that in the second half of the calculation, we are multiplying by 40, not 4.

Divide numbers up to 4 digits by a one-digit number

$$\begin{array}{r}
 24 \div 4 = 6 \\
 \hline
 4 \overline{) 24} \\
 \underline{4} \\
 0
 \end{array}$$

Labels: divisor (4), quotient (6), dividend (24)

$$625 \div 5 =$$

$$\begin{array}{r}
 \\
 5 \overline{) 625} \\
 \underline{5} \\
 \\
 \underline{ } \\

 \end{array}$$

1) Starting from the left, see how many times the divisor will go into each digit of the dividend

You can check by doing short multiplication.

$$125 \times 5 = 625 \quad \checkmark$$

Multiply and divide numbers mentally by drawing upon known facts

$$7 \times 0.5$$

$$7 \times 5 = 35$$

$$7 \times 0.5 = 3.5$$

Dividing by 10 (indicated by red arrows pointing down)

$$2400 \div 6$$

$$24 \div 6 = 4$$

$$2400 \div 6 = 400$$

Multiplying by 100 (indicated by blue arrows pointing down from 24)

See if there is a known times table multiplication or division fact you can use to answer the question.

Use your knowledge of multiplying and dividing by 10, 100 and 1000 to adjust the answer.