

# MATHS- MULTIPLICATION AND DIVISION B

## YEAR 5

$$\begin{array}{r} 44 \text{ r}1 \\ 11 \overline{) 485} \\ \underline{22} \phantom{4} \\ 28 \phantom{5} \\ \underline{22} \phantom{5} \\ 65 \\ \underline{66} \\ 1 \end{array}$$

$$\begin{array}{r} 6425 \\ \times 7 \\ \hline 44975 \\ 4213 \end{array}$$

### RECAP

- Recall division facts for multiplication tables up to  $12 \times 12$
- Find factor pairs of a given number
- Understand the commutativity of multiplication
- Multiply and divide a two-digit number by 10, 100
- Multiply a three-digit number by a one-digit number using short multiplication

### CRUCIAL KNOWLEDGE

- Multiply and divide numbers mentally drawing upon known facts
- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers
- Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context
- Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.

### EXTENDED KNOWLEDGE

Solve reasoning and problem solving questions using the above.

### KEY VOCABULARY

multiply	a mathematical operation where a number is added to itself a number of times
divide, division, dividend, divisor	to divide or division is sharing or grouping a number into equal parts
product	the result when two numbers are multi-
commutative	involving the condition that a group of quantities connected by operators gives the same result whatever the order of the quantities involved, e.g. $a \times b = b \times a$

factor	a whole number is a smaller whole number which can be multiplied with another whole number to produce the first whole number
short division	arithmetical division in which the quotient is written directly without a succession of intermediate workings
long multiplication	arithmetical division in which the divisor has two or more figures, and a series of workings is made as successive groups of digits of the dividend are divided by the divisor, to avoid excessive mental calculation
estimate	If you estimate a quantity or value, you make an approximate judgment or calculation

#### Formal methods of multiplication and division

<p>3741 x 6 becomes</p> $\begin{array}{r} 3741 \\ \times 6 \\ \hline 22446 \\ 42 \end{array}$	<p>485 ÷ 11 becomes</p> $\begin{array}{r} 44 \text{ r}1 \\ 11 \overline{) 485} \\ \underline{22} \phantom{4} \\ 28 \phantom{5} \\ \underline{22} \phantom{5} \\ 65 \\ \underline{66} \\ 1 \end{array}$	<p>37 x 26 becomes</p> $\begin{array}{r} 37 \\ \times 26 \\ \hline 680 \\ 204 \\ \hline 884 \end{array}$	<p>134 x 27 becomes</p> $\begin{array}{r} 134 \\ \times 27 \\ \hline 2680 \\ 938 \\ \hline 3618 \\ 11 \end{array}$
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multiply times groups of lots of product repeated addition



#### FACTORS

divide division share shared by equal

