

# Knowledge Organiser - Maths

## Key Facts - Division

- Division is the method of sharing a group of objects into equal parts.
- Division is the opposite of multiplying.
- When we know a multiplication fact we can find a division fact:  
eg.  $3 \times 5 = 15$ , so  $15 \div 3 = 5$
- Long division is a method used for dividing large numbers.

$$\begin{array}{r} \text{Quotient} \\ 13 \\ 5 \overline{)65} \\ \text{Divisor} \quad \text{Dividend} \end{array}$$

## Key Facts - Multiplication

<b>1x</b> $1 \times 1 = 1$ $1 \times 2 = 2$ $1 \times 3 = 3$ $1 \times 4 = 4$ $1 \times 5 = 5$ $1 \times 6 = 6$ $1 \times 7 = 7$ $1 \times 8 = 8$ $1 \times 9 = 9$ $1 \times 10 = 10$ $1 \times 11 = 11$ $1 \times 12 = 12$	<b>2x</b> $2 \times 1 = 2$ $2 \times 2 = 4$ $2 \times 3 = 6$ $2 \times 4 = 8$ $2 \times 5 = 10$ $2 \times 6 = 12$ $2 \times 7 = 14$ $2 \times 8 = 16$ $2 \times 9 = 18$ $2 \times 10 = 20$ $2 \times 11 = 22$ $2 \times 12 = 24$	<b>3x</b> $3 \times 1 = 3$ $3 \times 2 = 6$ $3 \times 3 = 9$ $3 \times 4 = 12$ $3 \times 5 = 15$ $3 \times 6 = 18$ $3 \times 7 = 21$ $3 \times 8 = 24$ $3 \times 9 = 27$ $3 \times 10 = 30$ $3 \times 11 = 33$ $3 \times 12 = 36$	<b>4x</b> $4 \times 1 = 4$ $4 \times 2 = 8$ $4 \times 3 = 12$ $4 \times 4 = 16$ $4 \times 5 = 20$ $4 \times 6 = 24$ $4 \times 7 = 28$ $4 \times 8 = 32$ $4 \times 9 = 36$ $4 \times 10 = 40$ $4 \times 11 = 44$ $4 \times 12 = 48$
<b>5x</b> $5 \times 1 = 5$ $5 \times 2 = 10$ $5 \times 3 = 15$ $5 \times 4 = 20$ $5 \times 5 = 25$ $5 \times 6 = 30$ $5 \times 7 = 35$ $5 \times 8 = 40$ $5 \times 9 = 45$ $5 \times 10 = 50$ $5 \times 11 = 55$ $5 \times 12 = 60$	<b>6x</b> $6 \times 1 = 6$ $6 \times 2 = 12$ $6 \times 3 = 18$ $6 \times 4 = 24$ $6 \times 5 = 30$ $6 \times 6 = 36$ $6 \times 7 = 42$ $6 \times 8 = 48$ $6 \times 9 = 54$ $6 \times 10 = 60$ $6 \times 11 = 66$ $6 \times 12 = 72$	<b>7x</b> $7 \times 1 = 7$ $7 \times 2 = 14$ $7 \times 3 = 21$ $7 \times 4 = 28$ $7 \times 5 = 35$ $7 \times 6 = 42$ $7 \times 7 = 49$ $7 \times 8 = 56$ $7 \times 9 = 63$ $7 \times 10 = 70$ $7 \times 11 = 77$ $7 \times 12 = 84$	<b>8x</b> $8 \times 1 = 8$ $8 \times 2 = 16$ $8 \times 3 = 24$ $8 \times 4 = 32$ $8 \times 5 = 40$ $8 \times 6 = 48$ $8 \times 7 = 56$ $8 \times 8 = 64$ $8 \times 9 = 72$ $8 \times 10 = 80$ $8 \times 11 = 88$ $8 \times 12 = 96$
<b>9x</b> $9 \times 1 = 9$ $9 \times 2 = 18$ $9 \times 3 = 27$ $9 \times 4 = 36$ $9 \times 5 = 45$ $9 \times 6 = 54$ $9 \times 7 = 63$ $9 \times 8 = 72$ $9 \times 9 = 81$ $9 \times 10 = 90$ $9 \times 11 = 99$ $9 \times 12 = 108$	<b>10x</b> $10 \times 1 = 10$ $10 \times 2 = 20$ $10 \times 3 = 30$ $10 \times 4 = 40$ $10 \times 5 = 50$ $10 \times 6 = 60$ $10 \times 7 = 70$ $10 \times 8 = 80$ $10 \times 9 = 90$ $10 \times 10 = 100$ $10 \times 11 = 110$ $10 \times 12 = 120$	<b>11x</b> $11 \times 1 = 11$ $11 \times 2 = 22$ $11 \times 3 = 33$ $11 \times 4 = 44$ $11 \times 5 = 55$ $11 \times 6 = 66$ $11 \times 7 = 77$ $11 \times 8 = 88$ $11 \times 9 = 99$ $11 \times 10 = 110$ $11 \times 11 = 121$ $11 \times 12 = 132$	<b>12x</b> $12 \times 1 = 12$ $12 \times 2 = 24$ $12 \times 3 = 36$ $12 \times 4 = 48$ $12 \times 5 = 60$ $12 \times 6 = 72$ $12 \times 7 = 84$ $12 \times 8 = 96$ $12 \times 9 = 108$ $12 \times 10 = 120$ $12 \times 11 = 132$ $12 \times 12 = 144$

Within long division we follow 5 steps:

**Divide:**  $3 \overline{)75}$   $3$  goes into  $7$  2 times... with some extra

**Multiply:**  $3 \overline{)75}$   $2 \times 3 = 6$

**Subtract:**  $3 \overline{)75}$   
 $\begin{array}{r} 2 \\ 3 \overline{)75} \\ -6 \\ \hline 15 \end{array}$

**Bring Down:**  $3 \overline{)75}$   
 $\begin{array}{r} 2 \\ 3 \overline{)75} \\ -6 \\ \hline 15 \end{array}$

**Repeat:**  $3 \overline{)75}$   $15 \div 3 = 5$   
 $5 \times 3 = 15$   
 $\begin{array}{r} 25 \\ 3 \overline{)75} \\ -6 \\ \hline 15 \\ -15 \\ \hline 0 \end{array}$

## Key Facts - Length, Mass, Volume

$$\begin{aligned} 10 \text{ mm} &= 1 \text{ cm} \\ 100 \text{ cm} &= 1 \text{ m} \\ 1000 \text{ m} &= 1 \text{ km} \end{aligned}$$

$$\begin{aligned} 1000 \text{ g} &= 1 \text{ kg} \\ 1000 \text{ ml} &= 1 \text{ L} \end{aligned}$$

## Key Vocabulary

divisor	A number by which another is divided.
quotient	The number resulting from division of one number by another.
dividend	The number which is divided by the divisor.