

Memorizing Multiplication Facts

MM 1

Memorizing the Multiplication Table can be a challenge. Fortunately, a few basic math rules reduce the amount of multiplication facts that you need to actually memorize. This page is a summary of those rules.

Multiplication Rules:

1. Zero Property : Anything times zero is zero.

You don't have to memorize multiplication facts involving zero.
The answer is always just 0.

Example: $7 \times 0 = 0$

2. Identity Property : Anything times 1 is just itself.

You don't have to memorize multiplication facts involving 1.
The answer is always just the same number you started with.

Example: $9 \times 1 = 9$

3. Times 10 : Anything times 10 just gets an extra zero stuck to the end.

You don't have to memorize multiplication facts involving 10.
You just put an extra zero on the end of the number being multiplied by 10.

Example: $4 \times 10 = 40$

4. Commutative Property : You can switch the order of a multiplication problem.

You don't have to memorize both combinations of a multiplication problem.
You get the same answer no matter which order the numbers are in.

If you know:
 $3 \times 5 = 15$

Then you also know:
 $5 \times 3 = 15$

Multiplication Table:

Knowing the rules above means that you only really need to memorize the 36 multiplication facts shown in white on this table.

	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

Review of Basic Multiplication Facts

MM 2

Instructions: Multiply these numbers. (This set includes the 36 multiplication facts you really need to memorize.)

$$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$$

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

$$\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6 \\ \times 9 \\ \hline \end{array}$$

Re-Writing Multiplication Problems

MM 3

Instructions: Re-write these multiplication problems in stacked form. You do NOT need to actually multiply them.

1 84×7

$$\begin{array}{r} 84 \\ \times 7 \\ \hline \end{array}$$

2 6×143

3 4×19

4 8×135

5 78×5

6 716×4

7 320×9

8 6×512

9 $1,061 \times 5$

10 $7 \times 2,378$

Multi-Digit Multiplication

MM 4

Instructions: Follow the procedure you learned in the video to multiply these numbers.

1
$$\begin{array}{r} 62 \\ \times 3 \\ \hline 186 \end{array}$$

2
$$\begin{array}{r} 97 \\ \times 2 \\ \hline \end{array}$$

3
$$\begin{array}{r} 38 \\ \times 5 \\ \hline \end{array}$$

4
$$\begin{array}{r} 18 \\ \times 6 \\ \hline \end{array}$$

5
$$\begin{array}{r} 26 \\ \times 6 \\ \hline \end{array}$$

6
$$\begin{array}{r} 67 \\ \times 3 \\ \hline \end{array}$$

7
$$\begin{array}{r} 52 \\ \times 4 \\ \hline \end{array}$$

8
$$\begin{array}{r} 33 \\ \times 8 \\ \hline \end{array}$$

9
$$\begin{array}{r} 57 \\ \times 4 \\ \hline \end{array}$$

10
$$\begin{array}{r} 64 \\ \times 8 \\ \hline \end{array}$$

11
$$\begin{array}{r} 135 \\ \times 5 \\ \hline \end{array}$$

12
$$\begin{array}{r} 216 \\ \times 4 \\ \hline \end{array}$$

Multi-Digit Multiplication - Set 2

MM 5

Instructions: Follow the procedure you learned in the video to multiply these numbers.

1
$$\begin{array}{r} 1 \\ 346 \\ \times 2 \\ \hline 692 \end{array}$$

2
$$\begin{array}{r} 402 \\ \times 7 \\ \hline \end{array}$$

3
$$\begin{array}{r} 145 \\ \times 4 \\ \hline \end{array}$$

4
$$\begin{array}{r} 873 \\ \times 5 \\ \hline \end{array}$$

5
$$\begin{array}{r} 841 \\ \times 3 \\ \hline \end{array}$$

6
$$\begin{array}{r} 609 \\ \times 9 \\ \hline \end{array}$$

7
$$\begin{array}{r} 419 \\ \times 3 \\ \hline \end{array}$$

8
$$\begin{array}{r} 586 \\ \times 2 \\ \hline \end{array}$$

9
$$\begin{array}{r} 728 \\ \times 8 \\ \hline \end{array}$$

10
$$\begin{array}{r} 820 \\ \times 6 \\ \hline \end{array}$$

11
$$\begin{array}{r} 243 \\ \times 9 \\ \hline \end{array}$$

12
$$\begin{array}{r} 536 \\ \times 7 \\ \hline \end{array}$$

Multi-Digit Multiplication - Set 3

MM 6

Instructions: Follow the procedure you learned in the video to multiply these numbers.

$$\begin{array}{r} \text{1} \quad \quad 3 \\ \times 24 \\ \times 8 \\ \hline 192 \end{array}$$

$$\begin{array}{r} \text{2} \quad \quad 63 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} \text{3} \quad \quad 73 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} \text{4} \quad \quad 51 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} \text{5} \quad \quad 329 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} \text{6} \quad \quad 795 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} \text{7} \quad \quad 617 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{8} \quad \quad 834 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{9} \quad \quad 1,306 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} \text{10} \quad 3,286 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} \text{11} \quad 9,312 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} \text{12} \quad 4,072 \\ \times 3 \\ \hline \end{array}$$