

Memorizing Multiplication Facts

A-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

A-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

A-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

A-MM 4

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

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

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

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

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

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

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

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

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

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

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

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

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

Multi-Digit Multiplication - Set 2

A-MM 5

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

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

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

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

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

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

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

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

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

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

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

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

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

Multi-Digit Multiplication - Set 3

A-MM 6

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

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

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

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

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

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

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

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

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

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

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

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

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