

You can multiply large numbers in your head with a few simple techniques. The keys are 10 and 100.

- To multiply by 2—think double.
- To multiply by 5—multiply by 10 and divide by 2.
- To multiply by 9—multiply by 10 and subtract the multiplicand.
- To multiply by 25—multiply by 100 and divide by 4.
- To multiply by 50—multiply by 100 and divide by 2.

Directions: Use the information in the chart to help solve these problems.

1.
$$\begin{array}{r} 416 \\ \times 2 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 540 \\ \times 2 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 350 \\ \times 2 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 480 \\ \times 2 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 461 \\ \times 2 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 230 \\ \times 5 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 460 \\ \times 5 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 351 \\ \times 5 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 840 \\ \times 5 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 580 \\ \times 5 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 38 \\ \times 50 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 67 \\ \times 50 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 68 \\ \times 50 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 78 \\ \times 50 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 44 \\ \times 50 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 62 \\ \times 25 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 48 \\ \times 25 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 92 \\ \times 25 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 24 \\ \times 25 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 82 \\ \times 25 \\ \hline \end{array}$$

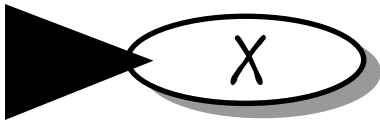
21.
$$\begin{array}{r} 21 \\ \times 9 \\ \hline \end{array}$$

22.
$$\begin{array}{r} 32 \\ \times 9 \\ \hline \end{array}$$

23.
$$\begin{array}{r} 62 \\ \times 9 \\ \hline \end{array}$$

24.
$$\begin{array}{r} 43 \\ \times 9 \\ \hline \end{array}$$

25.
$$\begin{array}{r} 56 \\ \times 9 \\ \hline \end{array}$$



Answer Key

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1. 2,400 m²
2. 3,000 ft.²
3. 1,600 yds.²
4. 2,800 cm²
5. 1,800 mm²
6. 6,300 mm²
7. 42 m²
8. 4,900 ft.²
9. 5,980 ft.²
10. 1,504 in.²

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1. 108 ft.²
2. 600 cm²
3. 264 cm²
4. 3,150 mm²
5. 351 in.²
6. 384 m²
7. 11,550 ft.²
8. 1,750 yds.²

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1. 288 ft.³
2. 900 m³
3. 792,000 cm³
4. 168,000 in.³
5. 281,600 mm³
6. 184,800 yd.³
7. 153,600 cm³
8. 1,200,000 ft.³
9. 60,000,000 ft.³
10. 135,000,000 ft.³

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|----------|-----------|
| 1. 600 | 7. 4,500 |
| 2. 5,400 | 8. 375 |
| 3. 775 | 9. 748 |
| 4. 1,540 | 10. 943 |
| 5. 3,312 | 11. 1,008 |
| 6. 2,784 | 12. 1,599 |

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1. 832
2. 1,080
3. 700
4. 960
5. 922
6. 1,150
7. 2,300
8. 1,755
9. 4,200
10. 2,900
11. 1,900
12. 3,350
13. 3,400
14. 3,900
15. 2,200
16. 1,550
17. 1,200
18. 2,300
19. 600
20. 2,050
21. 189
22. 288
23. 558
24. 387
25. 504

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	Actual	Estimate
1.	5,952	5,400
2.	3,654	3,600
3.	294,056	300,000
4.	178,308	160,000
5.	378,351	350,000
6.	623,715	600,000
7.	3,283	3,500
8.	2,262	2,400
9.	201,984	240,000
10.	333,062	350,000
11.	19,450,486	21,000,000
12.	27,642,244	27,000,000

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1. 64, 128, 256, 512
2. 81, 243, 729, 2,187
3. 108, 324, 972, 2,916
4. 625, 3,125, 15,625, 78,125
5. 256, 1,024, 4,096, 16,384
6. 343, 2,401, 16,807, 117,649
7. 47, 95, 191, 383
(a x 2) + 1
8. 65, 129, 257, 513
(a x 2) - 1
9. 284, 851, 2,552, 7,655
(a x 3) - 1
10. 125, 253, 509, 1,021
(a x 2) + 3

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1. 3 x 3 = 9
2. 7 x 7 = 49
3. 4 x 4 = 16
4. 9 x 9 = 81
5. 2 x 2 = 4
6. 8 x 8 = 64
7. 10 x 10 = 100
8. 6 x 6 = 36
9. 11 x 11 = 121
10. 12 x 12 = 144
11. 2 x 2 = 4
4 x 2 = 8
2³ = 8
12. 3 x 3 = 9
9 x 3 = 27
3³ = 27
13. 5 x 5 = 25
25 x 5 = 125
5³ = 125
14. 7 x 7 = 49
49 x 7 = 343
7³ = 343
15. 4 x 4 = 16
16 x 4 = 64
4³ = 64
16. 6 x 6 = 36
36 x 6 = 216
6³ = 216
17. 10 x 10 = 100
100 x 10 = 1,000
10³ = 1,000
18. 9 x 9 = 81
81 x 9 = 729
9³ = 729
19. 11 x 11 = 121
121 x 11 = 1,331
11³ = 1,331
20. 12 x 12 = 144
144 x 12 = 1,728
12³ = 1,728

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1. 2⁵ = 32
2. 3 x 3 = 9
9 x 3 = 27
27 x 3 = 81
3⁴ = 81
3. 5 x 5 = 25
25 x 5 = 125
125 x 5 = 625
5⁴ = 625
4. 3 x 3 = 9
9 x 3 = 27
27 x 3 = 81
81 x 3 = 243
3⁵ = 243
5. 6 x 6 = 36
36 x 6 = 216
216 x 6 = 1,296
6⁴ = 1,296
6. 6 x 6 = 36
36 x 6 = 216
216 x 6 = 1,296
1,296 x 6 = 7,776
6⁵ = 7,776
7. 7 x 7 = 49
49 x 7 = 343
343 x 7 = 2,401
7⁴ = 2,401
8. 7 x 7 = 49
49 x 7 = 343
343 x 7 = 2,401
2,401 x 7 = 16,807
7⁵ = 16,807
9. 2 x 2 = 4
4 x 2 = 8
8 x 2 = 16
16 x 2 = 32
32 x 2 = 64
2⁶ = 64
10. 3 x 3 = 9
9 x 3 = 27
27 x 3 = 81
81 x 3 = 243
243 x 3 = 729
3⁶ = 729

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|----------|-----------|
| 1. 120 | 16. 160 |
| 2. 468 | 17. 72 |
| 3. 800 | 18. 250 |
| 4. 1,350 | 19. 600 |
| 5. 630 | 20. 510 |
| 6. 2,100 | 21. 3,000 |
| 7. 12 | 22. 260 |
| 8. 80 | 23. 432 |
| 9. 16 | 24. 640 |
| 10. 72 | 25. 27a |
| 11. 180 | 26. 32b |
| 12. 144 | 27. 60b |
| 13. 144 | 28. 240 |
| 14. 119 | 29. 20a |
| 15. 600 | 30. 84a |

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|--------|--------|
| 1. 32 | 9. 79 |
| 2. 45 | 10. 10 |
| 3. 6 | 11. 16 |
| 4. 35 | 12. 60 |
| 5. 160 | 13. 6 |
| 6. 5 | 14. 32 |
| 7. 48 | 15. 4 |
| 8. 31 | |

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1. \$2,450.00
2. \$1,360.00
3. \$3,920.00
4. \$1,785.00
5. \$1,270.40
6. \$2,037.50
7. \$935.25
8. \$2,441.40
9. \$5,028.54
10. \$2,334.96
11. \$50,240.00
12. \$172,625.00
13. \$300,015.00
14. \$192,675.00
15. \$4,886.25

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1. 960 times
2. 23,040 breaths
3. 1,080 times
4. 25,920 times
5. 1,440 qts.
6. 180,000,000 red blood cells
7. 4,320,000,000 red blood cells
8. 36,500,000 times
9. 547,500 gal.
10. 187,200 times a day
11. 720,000,000 cells
12. 7,300,000,000 particles

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1. 720 lbs.
2. 1,120 lbs.
3. 6,600 lbs.
4. 15,500 lbs.
5. 4,375 lbs.
6. 11,130 lbs.
7. 672 lbs.
8. 16,080 lbs.
9. 1,665 lbs.
10. 2,025 lbs.
11. 3,267 lbs.
12. 375 lbs.
13. 48,050 lbs.
14. 101,625 lbs.
15. 12,300 lbs.

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1. 81 ÷ 9 x 7 ÷ 21 x 6 ÷ 2 = 9
2. 12 x 6 x 2 ÷ 12 ÷ 4 x 5 = 15
3. 88 ÷ 11 x 3 ÷ 4 x 12 ÷ 8 = 9
4. 108 ÷ 4 ÷ 9 x 5 x 6 ÷ 30 = 3
5. 54 ÷ 9 x 6 x 2 ÷ 8 x 15 = 135
6. 32 x 2 ÷ 8 x 12 ÷ 3 ÷ 2 = 16
7. 15 ÷ 5 x 7 x 3 ÷ 7 x 5 = 45
8. 91 ÷ 13 x 3 x 5 x 4 ÷ 21 = 20
9. 33 ÷ 11 x 5 x 2 ÷ 6 x 21 = 105
10. 100 ÷ 100 x 12 x 2 x 3 ÷ 9 = 8

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Sometimes rabbits just multiply.