

MULTIPLYING NUMBERS BY 10, 100, 1000 - 2

Rule 1: To multiply a number by **10**, **100**, or **1000**, move the decimal point in that number to the **right** as many places as there are zeros in the multiplier, attaching zeros **if needed** to make the required places.

When we multiply a number by a power of ten, we move the decimal point to the _____ (right/left) as many places as there are _____ in the power of ten.

Apply this rule to the following problems without actually doing the multiplication:

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|------------------------|---------|-------------------------|---------|
| 1) 0.814×10 | = _____ | 13) 0.8×100 | = _____ |
| 2) 7.123×100 | = _____ | 14) 1.9×100 | = _____ |
| 3) 15×1000 | = _____ | 15) 61×10 | = _____ |
| 4) 7.871×100 | = _____ | 16) 0.871×100 | = _____ |
| 5) 0.56×1000 | = _____ | 17) 6.12×1000 | = _____ |
| 6) $1.4 \times 10,000$ | = _____ | 18) $9.1 \times 10,000$ | = _____ |
| 7) 0.613×100 | = _____ | 19) 0.04×1000 | = _____ |
| 8) 8.7123×10 | = _____ | 20) 612×100 | = _____ |
| 9) 0.06×100 | = _____ | 21) 9.9×1000 | = _____ |
| 10) 7.02×1000 | = _____ | 22) 0.88×10 | = _____ |
| 11) 1.39×100 | = _____ | 23) 6×1000 | = _____ |
| 12) 16×100 | = _____ | 24) 2.1×10 | = _____ |
- 25) When we move a decimal point three places to the right, we _____ (multiply/divide) a number by _____.
- 26) Instead of using long multiplication, you can multiply a number by 1000 by moving the decimal point _____ (how many) places to the _____ (right/left).
- 27) When we move the decimal point one place to the right, we _____ (multiply/divide) a number by _____.
- 28) Instead of using long multiplication, you can multiply a number by 100,000 by moving the decimal point _____ (how many) places to the _____ (right/left).

RULE: RIGHT/ZEROS

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|-----------|-----------|-----------|----------|------------|-----------|-------------------|
| 1) 8.14 | 5) 560 | 9) 6 | 13) 80 | 17) 6,120 | 21) 9,900 | 25) MULTIPLY/1000 |
| 2) 712.3 | 6) 14,000 | 10) 7,020 | 14) 190 | 18) 91,000 | 22) 8.8 | 26) THREE/RIGHT |
| 3) 15,000 | 7) 61.3 | 11) 139 | 15) 610 | 19) 40 | 23) 6,000 | 27) MULTIPLY/10 |
| 4) 787.1 | 8) 87.123 | 12) 1,600 | 16) 87.1 | 20) 61,200 | 24) 21 | 28) FIVE/RIGHT |