

## 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:**

- |                        |         |                         |         |
|------------------------|---------|-------------------------|---------|
| 1) $0.814 \times 10$   | = _____ | 13) $0.8 \times 100$    | = _____ |
| 2) $7.123 \times 100$  | = _____ | 14) $1.9 \times 100$    | = _____ |
| 3) $15 \times 1000$    | = _____ | 15) $61 \times 10$      | = _____ |
| 4) $7.871 \times 100$  | = _____ | 16) $0.871 \times 100$  | = _____ |
| 5) $0.56 \times 1000$  | = _____ | 17) $6.12 \times 1000$  | = _____ |
| 6) $1.4 \times 10,000$ | = _____ | 18) $9.1 \times 10,000$ | = _____ |
| 7) $0.613 \times 100$  | = _____ | 19) $0.04 \times 1000$  | = _____ |
| 8) $8.7123 \times 10$  | = _____ | 20) $612 \times 100$    | = _____ |
| 9) $0.06 \times 100$   | = _____ | 21) $9.9 \times 1000$   | = _____ |
| 10) $7.02 \times 1000$ | = _____ | 22) $0.88 \times 10$    | = _____ |
| 11) $1.39 \times 100$  | = _____ | 23) $6 \times 1000$     | = _____ |
| 12) $16 \times 100$    | = _____ | 24) $2.1 \times 10$     | = _____ |
- 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    |