Multiplying and Dividing by Powers of 10 - ANSWER KEY

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 10 of 10

Powers of 10: $10^1 = 10$, $10^2 = 100$, $10^3 = 1{,}000$. Multiplying by 10 moves each digit one place to the left; dividing by 10 moves each digit one place to the right.

Part A: Multiply by a power of 10. The exponent tells how many zeros to write.

1. $89 \times 10^3 =$ **89,000**
2. $60 \times 10^2 =$ **6,000**
3. $7 \times 10^3 =$ **7,000**
4. $81 \times 10^1 =$ **810**
5. $14 \times 10^2 =$ **1,400**
6. $58 \times 10^3 =$ **58,000**

Part B: Multiply. Move the decimal point one place to the right for each power of 10.

7. $13.53 \times 10^1 =$ **135.3**
8. $61.03 \times 10^3 =$ **61,030**
9. $82.9 \times 10^3 =$ **82,900**
10. $64.64 \times 1{,}000 =$ **64,640**
11. $97.39 \times 10^3 =$ **97,390**
12. $44.5 \times 1{,}000 =$ **44,500**

Part C: Divide. Move the decimal point one place to the left for each power of 10.

13. $28.8 \div 1{,}000 =$ **0.0288**
14. $4{,}597 \div 10 =$ **459.7**
15. $7{,}413 \div 100 =$ **74.13**
16. $40.7 \div 10^3 =$ **0.0407**
17. $7{,}694 \div 10^2 =$ **76.94**
18. $20.5 \div 10^3 =$ **0.0205**