Multiplying and Dividing by Powers of 10 - ANSWER KEY

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 1 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. $76 \times 10^3 =$ **76,000**
2. $39 \times 10^3 =$ **39,000**
3. $94 \times 10^2 =$ **9,400**
4. $98 \times 10^3 =$ **98,000**
5. $97 \times 10^2 =$ **9,700**
6. $45 \times 10^2 =$ **4,500**

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

7. $72.6 \times 10 =$ **726**
8. $28.56 \times 1{,}000 =$ **28,560**
9. $99.82 \times 1{,}000 =$ **99,820**
10. $78.15 \times 10^2 =$ **7,815**
11. $25.14 \times 10^1 =$ **251.4**
12. $44.27 \times 10^3 =$ **44,270**

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

13. $9{,}742 \div 10^1 =$ **974.2**
14. $93.4 \div 10^1 =$ **9.34**
15. $6{,}813 \div 100 =$ **68.13**
16. $8{,}698 \div 100 =$ **86.98**
17. $36.4 \div 10^1 =$ **3.64**
18. $174 \div 10 =$ **17.4**