Multiplying and Dividing by Powers of 10 - ANSWER KEY

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 3 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. $11 \times 10^3 =$ **11,000**
2. $70 \times 10^2 =$ **7,000**
3. $37 \times 10^2 =$ **3,700**
4. $39 \times 10^1 =$ **390**
5. $80 \times 10^1 =$ **800**
6. $3 \times 10^1 =$ **30**

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

7. $13.65 \times 10 =$ **136.5**
8. $44.3 \times 1{,}000 =$ **44,300**
9. $99.2 \times 10^3 =$ **99,200**
10. $75.6 \times 1{,}000 =$ **75,600**
11. $26.78 \times 10^1 =$ **267.8**
12. $18.73 \times 1{,}000 =$ **18,730**

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

13. $38.2 \div 1{,}000 =$ **0.0382**
14. $87.2 \div 100 =$ **0.872**
15. $84.2 \div 10^1 =$ **8.42**
16. $91.7 \div 10^3 =$ **0.0917**
17. $3{,}751 \div 10 =$ **375.1**
18. $9{,}564 \div 1{,}000 =$ **9.564**