Multiplying and Dividing by Powers of 10 - ANSWER KEY

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 2 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. $20 \times 10^1 =$ **200**
2. $41 \times 10^3 =$ **41,000**
3. $29 \times 10^3 =$ **29,000**
4. $13 \times 10^3 =$ **13,000**
5. $16 \times 10^1 =$ **160**
6. $86 \times 10^3 =$ **86,000**

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

7. $55.8 \times 10^2 =$ **5,580**
8. $20.9 \times 100 =$ **2,090**
9. $55.19 \times 10^1 =$ **551.9**
10. $43.56 \times 10^3 =$ **43,560**
11. $46.6 \times 1{,}000 =$ **46,600**
12. $45.45 \times 10^1 =$ **454.5**

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

13. $81.3 \div 10^2 =$ **0.813**
14. $1{,}849 \div 100 =$ **18.49**
15. $46.3 \div 10^3 =$ **0.0463**
16. $36.4 \div 100 =$ **0.364**
17. $60.1 \div 10 =$ **6.01**
18. $313 \div 10^1 =$ **31.3**