Name: _____ Date: _____

Multiplying and Dividing by Powers of 10

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 7 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. $52 \times 10^3 =$ _____
2. $94 \times 10^3 =$ _____
3. $36 \times 10^2 =$ _____
4. $20 \times 10^2 =$ _____
5. $43 \times 10^1 =$ _____
6. $14 \times 10^3 =$ _____

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

7. $14.31 \times 10^2 =$ _____
8. $94.1 \times 10^2 =$ _____
9. $59.4 \times 10^2 =$ _____
10. $66.5 \times 10^1 =$ _____
11. $74.92 \times 10 =$ _____
12. $25.2 \times 100 =$ _____

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

13. $7{,}203 \div 10^2 =$ _____
14. $47.1 \div 10^1 =$ _____
15. $31.7 \div 10^2 =$ _____
16. $8{,}851 \div 10 =$ _____
17. $3.9 \div 10^3 =$ _____
18. $9{,}226 \div 10^3 =$ _____

Multiplying and Dividing by Powers of 10 - ANSWER KEY

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 7 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. $52 \times 10^3 =$ **52,000**
2. $94 \times 10^3 =$ **94,000**
3. $36 \times 10^2 =$ **3,600**
4. $20 \times 10^2 =$ **2,000**
5. $43 \times 10^1 =$ **430**
6. $14 \times 10^3 =$ **14,000**

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

7. $14.31 \times 10^2 =$ **1,431**
8. $94.1 \times 10^2 =$ **9,410**
9. $59.4 \times 10^2 =$ **5,940**
10. $66.5 \times 10^1 =$ **665**
11. $74.92 \times 10 =$ **749.2**
12. $25.2 \times 100 =$ **2,520**

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

13. $7{,}203 \div 10^2 =$ **72.03**
14. $47.1 \div 10^1 =$ **4.71**
15. $31.7 \div 10^2 =$ **0.317**
16. $8{,}851 \div 10 =$ **885.1**
17. $3.9 \div 10^3 =$ **0.0039**
18. $9{,}226 \div 10^3 =$ **9.226**