Name: _____ Date: _____

Multiplying and Dividing by Powers of 10

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 8 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. $47 \times 10^2 =$ _____
2. $15 \times 10^2 =$ _____
3. $47 \times 10^1 =$ _____
4. $35 \times 10^2 =$ _____
5. $31 \times 10^3 =$ _____
6. $70 \times 10^1 =$ _____

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

7. $51.83 \times 1{,}000 =$ _____
8. $63.3 \times 10^1 =$ _____
9. $50.5 \times 100 =$ _____
10. $85.54 \times 100 =$ _____
11. $25.7 \times 10^3 =$ _____
12. $71.9 \times 1{,}000 =$ _____

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

13. $84.8 \div 10^3 =$ _____
14. $6{,}112 \div 10^1 =$ _____
15. $80.8 \div 10^3 =$ _____
16. $49.7 \div 10^2 =$ _____
17. $9{,}721 \div 10^2 =$ _____
18. $75.4 \div 10 =$ _____

Multiplying and Dividing by Powers of 10 - ANSWER KEY

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 8 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. $47 \times 10^2 =$ **4,700**
2. $15 \times 10^2 =$ **1,500**
3. $47 \times 10^1 =$ **470**
4. $35 \times 10^2 =$ **3,500**
5. $31 \times 10^3 =$ **31,000**
6. $70 \times 10^1 =$ **700**

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

7. $51.83 \times 1{,}000 =$ **51,830**
8. $63.3 \times 10^1 =$ **633**
9. $50.5 \times 100 =$ **5,050**
10. $85.54 \times 100 =$ **8,554**
11. $25.7 \times 10^3 =$ **25,700**
12. $71.9 \times 1{,}000 =$ **71,900**

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

13. $84.8 \div 10^3 =$ **0.0848**
14. $6{,}112 \div 10^1 =$ **611.2**
15. $80.8 \div 10^3 =$ **0.0808**
16. $49.7 \div 10^2 =$ **0.497**
17. $9{,}721 \div 10^2 =$ **97.21**
18. $75.4 \div 10 =$ **7.54**