Name: _____ Date: _____

Multiplying and Dividing by Powers of 10

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 9 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. $60 \times 10^3 =$ _____
2. $89 \times 10^1 =$ _____
3. $93 \times 10^3 =$ _____
4. $83 \times 10^2 =$ _____
5. $90 \times 10^1 =$ _____
6. $76 \times 10^2 =$ _____

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

7. $43.3 \times 1{,}000 =$ _____
8. $82.7 \times 10 =$ _____
9. $15.9 \times 10^3 =$ _____
10. $80.23 \times 10^3 =$ _____
11. $28.26 \times 10^2 =$ _____
12. $22.83 \times 10^1 =$ _____

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

13. $34.9 \div 10^1 =$ _____
14. $4{,}343 \div 100 =$ _____
15. $27.6 \div 100 =$ _____
16. $86.7 \div 10^2 =$ _____
17. $13.1 \div 100 =$ _____
18. $8{,}241 \div 1{,}000 =$ _____

Multiplying and Dividing by Powers of 10 - ANSWER KEY

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 9 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. $60 \times 10^3 =$ **60,000**
2. $89 \times 10^1 =$ **890**
3. $93 \times 10^3 =$ **93,000**
4. $83 \times 10^2 =$ **8,300**
5. $90 \times 10^1 =$ **900**
6. $76 \times 10^2 =$ **7,600**

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

7. $43.3 \times 1{,}000 =$ **43,300**
8. $82.7 \times 10 =$ **827**
9. $15.9 \times 10^3 =$ **15,900**
10. $80.23 \times 10^3 =$ **80,230**
11. $28.26 \times 10^2 =$ **2,826**
12. $22.83 \times 10^1 =$ **228.3**

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

13. $34.9 \div 10^1 =$ **3.49**
14. $4{,}343 \div 100 =$ **43.43**
15. $27.6 \div 100 =$ **0.276**
16. $86.7 \div 10^2 =$ **0.867**
17. $13.1 \div 100 =$ **0.131**
18. $8{,}241 \div 1{,}000 =$ **8.241**