Name: _____ Date: _____

Multiplying and Dividing by Powers of 10

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 6 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. $42 \times 10^1 =$ _____
2. $65 \times 10^3 =$ _____
3. $77 \times 10^3 =$ _____
4. $71 \times 10^3 =$ _____
5. $25 \times 10^1 =$ _____
6. $72 \times 10^2 =$ _____

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

7. $74.16 \times 1{,}000 =$ _____
8. $29.56 \times 10 =$ _____
9. $58.16 \times 100 =$ _____
10. $81.48 \times 10^2 =$ _____
11. $41.5 \times 1{,}000 =$ _____
12. $96.91 \times 10^3 =$ _____

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

13. $7{,}932 \div 10^1 =$ _____
14. $6{,}607 \div 100 =$ _____
15. $9.9 \div 10^3 =$ _____
16. $2{,}226 \div 10^2 =$ _____
17. $9{,}955 \div 10^1 =$ _____
18. $2{,}205 \div 10^3 =$ _____

Multiplying and Dividing by Powers of 10 - ANSWER KEY

Grade 5 | Multiplying and dividing by powers of 10, including exponents | Version 6 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. $42 \times 10^1 =$ **420**
2. $65 \times 10^3 =$ **65,000**
3. $77 \times 10^3 =$ **77,000**
4. $71 \times 10^3 =$ **71,000**
5. $25 \times 10^1 =$ **250**
6. $72 \times 10^2 =$ **7,200**

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

7. $74.16 \times 1{,}000 =$ **74,160**
8. $29.56 \times 10 =$ **295.6**
9. $58.16 \times 100 =$ **5,816**
10. $81.48 \times 10^2 =$ **8,148**
11. $41.5 \times 1{,}000 =$ **41,500**
12. $96.91 \times 10^3 =$ **96,910**

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

13. $7{,}932 \div 10^1 =$ **793.2**
14. $6{,}607 \div 100 =$ **66.07**
15. $9.9 \div 10^3 =$ **0.0099**
16. $2{,}226 \div 10^2 =$ **22.26**
17. $9{,}955 \div 10^1 =$ **995.5**
18. $2{,}205 \div 10^3 =$ **2.205**