

Exponents Rules

Name: _____

Date: _____

Rewrite each expression using product rule.

1) $9^5 \times 9^{-4} =$ _____

2) $18^{-3} \times 18^9 =$ _____

3) $7^3 \times 7^7 =$ _____

4) $6^{-4} \times 6^{-2} =$ _____

5) $15^{-6} \times 15^4 =$ _____

6) $3^8 \times 3^{10} =$ _____

Rewrite each expression using quotient rule.

1) $4^{-9} \div 4^{-7} =$ _____

2) $10^4 \div 10^{-5} =$ _____

3) $12^{-3} \div 12^8 =$ _____

4) $5^2 \div 5^{10} =$ _____

5) $2^6 \div 2^5 =$ _____

6) $7^{-6} \div 7^7 =$ _____

Rewrite each expression using power rule.

1) $(12^6)^{-2} =$ _____

2) $(9^{-3})^4 =$ _____

3) $(7^8)^6 =$ _____

4) $(18^{-9})^{-1} =$ _____

5) $(14^{-3})^7 =$ _____

6) $(3^2)^2 =$ _____

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Rewrite each expression using product rule.

1) $9^5 \times 9^{-4} = \underline{\quad 9^1 \quad}$

2) $18^{-3} \times 18^9 = \underline{\quad 18^6 \quad}$

3) $7^3 \times 7^7 = \underline{\quad 7^{10} \quad}$

4) $6^{-4} \times 6^{-2} = \underline{\quad \frac{1}{6^6} \quad}$

5) $15^{-6} \times 15^4 = \underline{\quad \frac{1}{15^2} \quad}$

6) $3^8 \times 3^{10} = \underline{\quad 3^{18} \quad}$

Rewrite each expression using quotient rule.

1) $4^{-9} \div 4^{-7} = \underline{\quad \frac{1}{4^2} \quad}$

2) $10^4 \div 10^{-5} = \underline{\quad 10^9 \quad}$

3) $12^{-3} \div 12^8 = \underline{\quad \frac{1}{12^{11}} \quad}$

4) $5^2 \div 5^{10} = \underline{\quad \frac{1}{5^8} \quad}$

5) $2^6 \div 2^5 = \underline{\quad 2^1 \quad}$

6) $7^{-6} \div 7^7 = \underline{\quad \frac{1}{7^{13}} \quad}$

Rewrite each expression using power rule.

1) $(12^6)^{-2} = \underline{\quad \frac{1}{12^{12}} \quad}$

2) $(9^{-3})^4 = \underline{\quad \frac{1}{9^{12}} \quad}$

3) $(7^8)^6 = \underline{\quad 7^{48} \quad}$

4) $(18^{-9})^{-1} = \underline{\quad 18^9 \quad}$

5) $(14^{-3})^7 = \underline{\quad \frac{1}{14^{21}} \quad}$

6) $(3^2)^2 = \underline{\quad 3^4 \quad}$