

Exponents Rules

Name: _____

Date: _____

Rewrite each expression using product rule.

1) $9^6 \times 9^{-4} =$ _____

2) $14^{-7} \times 14^2 =$ _____

3) $15^{-3} \times 15^5 =$ _____

4) $8^{-9} \times 8^{-6} =$ _____

5) $7^{-8} \times 7^4 =$ _____

6) $4^3 \times 4^{-10} =$ _____

Rewrite each expression using quotient rule.

1) $13^{-5} \div 13^{-3} =$ _____

2) $8^6 \div 8^{-8} =$ _____

3) $6^{-7} \div 6^4 =$ _____

4) $19^9 \div 19^6 =$ _____

5) $11^9 \div 11^{-2} =$ _____

6) $2^{-10} \div 2^{-5} =$ _____

Rewrite each expression using power rule.

1) $(8^{-7})^3 =$ _____

2) $(12^{-8})^2 =$ _____

3) $(4^5)^{-4} =$ _____

4) $(6^{-3})^9 =$ _____

5) $(17^{-6})^{-5} =$ _____

6) $(9^5)^1 =$ _____

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Rewrite each expression using product rule.

1) $9^6 \times 9^{-4} = \underline{\quad 9^2 \quad}$	2) $14^{-7} \times 14^2 = \underline{\quad \frac{1}{14^5} \quad}$
3) $15^{-3} \times 15^5 = \underline{\quad 15^2 \quad}$	4) $8^{-9} \times 8^{-6} = \underline{\quad \frac{1}{8^{15}} \quad}$
5) $7^{-8} \times 7^4 = \underline{\quad \frac{1}{7^4} \quad}$	6) $4^3 \times 4^{-10} = \underline{\quad \frac{1}{4^7} \quad}$

Rewrite each expression using quotient rule.

1) $13^{-5} \div 13^{-3} = \underline{\quad \frac{1}{13^2} \quad}$	2) $8^6 \div 8^{-8} = \underline{\quad 8^{14} \quad}$
3) $6^{-7} \div 6^4 = \underline{\quad \frac{1}{6^{11}} \quad}$	4) $19^9 \div 19^6 = \underline{\quad 19^3 \quad}$
5) $11^9 \div 11^{-2} = \underline{\quad 11^{11} \quad}$	6) $2^{-10} \div 2^{-5} = \underline{\quad \frac{1}{2^5} \quad}$

Rewrite each expression using power rule.

1) $(8^{-7})^3 = \underline{\quad \frac{1}{8^{21}} \quad}$	2) $(12^{-8})^2 = \underline{\quad \frac{1}{12^{16}} \quad}$
3) $(4^5)^{-4} = \underline{\quad \frac{1}{4^{20}} \quad}$	4) $(6^{-3})^9 = \underline{\quad \frac{1}{6^{27}} \quad}$
5) $(17^{-6})^{-5} = \underline{\quad 17^{30} \quad}$	6) $(9^5)^1 = \underline{\quad 9^5 \quad}$