

Exponents Rules

Name: _____

Date: _____

Rewrite each expression using product rule.

1) $4^3 \times 4^{-8} =$ _____

2) $10^{-9} \times 10^2 =$ _____

3) $9^5 \times 9^7 =$ _____

4) $7^{-1} \times 7^{-6} =$ _____

5) $1^{-6} \times 1^4 =$ _____

6) $2^5 \times 2^{-3} =$ _____

Rewrite each expression using quotient rule.

1) $5^{-4} \div 5^{-3} =$ _____

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

3) $12^{-7} \div 12^6 =$ _____

4) $4^8 \div 4^5 =$ _____

5) $7^5 \div 7^{-2} =$ _____

6) $10^{-6} \div 10^{-7} =$ _____

Rewrite each expression using power rule.

1) $(13^{-6})^4 =$ _____

2) $(7^8)^{-1} =$ _____

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

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

5) $(9^{-4})^2 =$ _____

6) $(3^9)^2 =$ _____

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Rewrite each expression using product rule.

$$1) 4^3 \times 4^{-8} = \underline{\frac{1}{4^5}}$$

$$2) 10^{-9} \times 10^2 = \underline{\frac{1}{10^7}}$$

$$3) 9^5 \times 9^7 = \underline{9^{12}}$$

$$4) 7^{-1} \times 7^{-6} = \underline{\frac{1}{7^7}}$$

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

$$6) 2^5 \times 2^{-3} = \underline{2^2}$$

Rewrite each expression using quotient rule.

$$1) 5^{-4} \div 5^{-3} = \underline{\frac{1}{5^1}}$$

$$2) 9^3 \div 9^{-4} = \underline{9^7}$$

$$3) 12^{-7} \div 12^6 = \underline{\frac{1}{12^{13}}}$$

$$4) 4^8 \div 4^5 = \underline{4^3}$$

$$5) 7^5 \div 7^{-2} = \underline{7^7}$$

$$6) 10^{-6} \div 10^{-7} = \underline{10^1}$$

Rewrite each expression using power rule.

$$1) (13^{-6})^4 = \underline{\frac{1}{13^{24}}}$$

$$2) (7^8)^{-1} = \underline{\frac{1}{7^8}}$$

$$3) (5^3)^{-5} = \underline{\frac{1}{5^{15}}}$$

$$4) (8^{-5})^{-7} = \underline{8^{35}}$$

$$5) (9^{-4})^2 = \underline{\frac{1}{9^8}}$$

$$6) (3^9)^2 = \underline{3^{18}}$$