

# Exponents Rules

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Rewrite each expression using product rule.

1)  $12^9 \times 12^{-7} =$  \_\_\_\_\_

2)  $11^{-8} \times 11^6 =$  \_\_\_\_\_

3)  $19^{10} \times 19^4 =$  \_\_\_\_\_

4)  $9^{-7} \times 9^{-3} =$  \_\_\_\_\_

5)  $16^{-5} \times 16^8 =$  \_\_\_\_\_

6)  $18^{-4} \times 18^{-1} =$  \_\_\_\_\_

Rewrite each expression using quotient rule.

1)  $10^{-5} \div 10^{-2} =$  \_\_\_\_\_

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

3)  $13^{-7} \div 13^9 =$  \_\_\_\_\_

4)  $17^4 \div 17^3 =$  \_\_\_\_\_

5)  $15^8 \div 15^{-6} =$  \_\_\_\_\_

6)  $8^{-1} \div 8^{-6} =$  \_\_\_\_\_

Rewrite each expression using power rule.

1)  $(20^5)^2 =$  \_\_\_\_\_

2)  $(15^7)^2 =$  \_\_\_\_\_

3)  $(17^3)^4 =$  \_\_\_\_\_

4)  $(6^{10})^5 =$  \_\_\_\_\_

5)  $(14^4)^9 =$  \_\_\_\_\_

6)  $(12^8)^3 =$  \_\_\_\_\_

# Exponents Rules

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Rewrite each expression using product rule.

- 1)  $12^9 \times 12^{-7} = \underline{12^2}$
- 2)  $11^{-8} \times 11^6 = \underline{\frac{1}{11^2}}$
- 3)  $19^{10} \times 19^4 = \underline{19^{14}}$
- 4)  $9^{-7} \times 9^{-3} = \underline{\frac{1}{9^{10}}}$
- 5)  $16^{-5} \times 16^8 = \underline{16^3}$
- 6)  $18^{-4} \times 18^{-1} = \underline{\frac{1}{18^5}}$

Rewrite each expression using quotient rule.

- 1)  $10^{-5} \div 10^{-2} = \underline{\frac{1}{10^3}}$
- 2)  $4^5 \div 4^{-10} = \underline{4^{15}}$
- 3)  $13^{-7} \div 13^9 = \underline{\frac{1}{13^{16}}}$
- 4)  $17^4 \div 17^3 = \underline{17^1}$
- 5)  $15^8 \div 15^{-6} = \underline{15^{14}}$
- 6)  $8^{-1} \div 8^{-6} = \underline{8^5}$

Rewrite each expression using power rule.

- 1)  $(20^5)^2 = \underline{20^{10}}$
- 2)  $(15^7)^2 = \underline{15^{14}}$
- 3)  $(17^3)^4 = \underline{17^{12}}$
- 4)  $(6^{10})^5 = \underline{6^{50}}$
- 5)  $(14^4)^9 = \underline{14^{36}}$
- 6)  $(12^8)^3 = \underline{12^{24}}$