

# Exponents Rules

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

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

Rewrite each expression using product rule.

1)  $7^5 \times 7^{-2} =$  \_\_\_\_\_

2)  $8^{-6} \times 8^3 =$  \_\_\_\_\_

3)  $5^3 \times 5^4 =$  \_\_\_\_\_

4)  $6^{-7} \times 6^{-5} =$  \_\_\_\_\_

5)  $2^{-8} \times 2^1 =$  \_\_\_\_\_

6)  $3^9 \times 3^{-3} =$  \_\_\_\_\_

Rewrite each expression using quotient rule.

1)  $9^{-5} \div 9^{-3} =$  \_\_\_\_\_

2)  $6^7 \div 6^{-5} =$  \_\_\_\_\_

3)  $5^{-4} \div 5^6 =$  \_\_\_\_\_

4)  $8^3 \div 8^3 =$  \_\_\_\_\_

5)  $7^1 \div 7^{-2} =$  \_\_\_\_\_

6)  $4^{-9} \div 4^{-8} =$  \_\_\_\_\_

Rewrite each expression using power rule.

1)  $(8^5)^2 =$  \_\_\_\_\_

2)  $(7^7)^1 =$  \_\_\_\_\_

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

4)  $(4^5)^8 =$  \_\_\_\_\_

5)  $(5^8)^4 =$  \_\_\_\_\_

6)  $(2^9)^6 =$  \_\_\_\_\_

# Exponents Rules

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Rewrite each expression using product rule.

$$1) 7^5 \times 7^{-2} = \underline{7^3}$$

$$2) 8^{-6} \times 8^3 = \underline{\frac{1}{8^3}}$$

$$3) 5^3 \times 5^4 = \underline{5^7}$$

$$4) 6^{-7} \times 6^{-5} = \underline{\frac{1}{6^{12}}}$$

$$5) 2^{-8} \times 2^1 = \underline{\frac{1}{2^7}}$$

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

Rewrite each expression using quotient rule.

$$1) 9^{-5} \div 9^{-3} = \underline{\frac{1}{9^2}}$$

$$2) 6^7 \div 6^{-5} = \underline{6^{12}}$$

$$3) 5^{-4} \div 5^6 = \underline{\frac{1}{5^{10}}}$$

$$4) 8^3 \div 8^3 = \underline{8^0}$$

$$5) 7^1 \div 7^{-2} = \underline{7^3}$$

$$6) 4^{-9} \div 4^{-8} = \underline{\frac{1}{4}}$$

Rewrite each expression using power rule.

$$1) (8^5)^2 = \underline{8^{10}}$$

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

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

$$4) (4^5)^8 = \underline{4^{40}}$$

$$5) (5^8)^4 = \underline{5^{32}}$$

$$6) (2^9)^6 = \underline{2^{54}}$$