



Solve each problem using the laws of exponents.

1)  $3^{-2} =$  \_\_\_\_\_  $=$  \_\_\_\_\_

2)  $2^2 \times 2^{-4} =$  \_\_\_\_\_  $=$  \_\_\_\_\_

3)  $(\frac{1}{2})^3 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

4)  $(3 \times 2)^4 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

6)  $(2^2)^3 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

7)  $2^4 \times 2^3 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

8)  $3^{-4} \times 3^2 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

9)  $2^2 \times 2^{-4} =$  \_\_\_\_\_  $=$  \_\_\_\_\_

10)  $2^0 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



Solve each problem using the laws of exponents.

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

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

3)  $(\frac{1}{2})^3 = \frac{1}{2^3} = \frac{1}{8}$

4)  $(3 \times 2)^4 = 3^4 \times 2^4 = 1,296$

5)  $2^1 = 2 = 2$

6)  $(2^2)^3 = 2^{2 \times 3} = 64$

7)  $2^4 \times 2^3 = 2^{4+3} = 128$

8)  $3^{-4} \times 3^2 = 3^{-4+2} = \frac{1}{9}$

9)  $2^2 \times 2^{-4} = 2^{2-4} = \frac{1}{4}$

10)  $2^0 = 1 = 1$

**Answers**

1.  $\frac{1}{9}$

2.  $\frac{1}{4}$

3.  $\frac{1}{8}$

4. **1,296**

5. **2**

6. **64**

7. **128**

8.  $\frac{1}{9}$

9.  $\frac{1}{4}$

10. **1**