



Solve each problem using the laws of exponents.

Answers

1)  $(\frac{1}{3})^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

1.                                 

2)  $3^{-2} \times 3^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2.                                 

3)  $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3.                                 

4)  $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4.                                 

5)  $2^{-2} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5.                                 

6)  $2^1 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6.                                 

7)  $(2 \times 3)^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7.                                 

8)  $3^2 \times 3^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8.                                 

9)  $(3^2)^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9.                                 

10)  $2^3 \times 2^{-2} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10.



Solve each problem using the laws of exponents.

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

2)  $3^{-2} \times 3^3 = 3^{-2+3} = 3$

3)  $3^0 = 1 = 1$

4)  $3^0 = 1 = 1$

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

6)  $2^1 = 2 = 2$

7)  $(2 \times 3)^2 = 2^2 \times 3^2 = 36$

8)  $3^2 \times 3^3 = 3^{2+3} = 243$

9)  $(3^2)^4 = 3^{2 \times 4} = 6,561$

10)  $2^3 \times 2^{-2} = 2^{3-2} = 2$

**Answers**

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

2.  $3$

3.  $1$

4.  $1$

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

6.  $2$

7.  $36$

8.  $243$

9.  $6,561$

10.  $2$



Solve each problem using the laws of exponents.

**Answers**

1)  $(3^2)^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

1.                     

2)  $(3 \times 2)^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2.                     

3)  $2^{-2} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3.                     

4)  $(\frac{1}{2})^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4.                     

5)  $2^4 \times 2^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5.                     

6)  $2^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6.                     

7)  $3^{-2} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7.                     

8)  $3^4 \times 3^{-3} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8.                     

9)  $2^{-2} \times 2^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9.                     

10)  $2^1 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10.



Solve each problem using the laws of exponents.

1)  $(3^2)^3 = 3^{2 \times 3} = 729$

2)  $(3 \times 2)^2 = 3^2 \times 2^2 = 36$

3)  $2^{-2} = \frac{1}{2^2} = \frac{1}{4}$

4)  $(\frac{1}{2})^4 = \frac{1}{2^4} = \frac{1}{16}$

5)  $2^4 \times 2^3 = 2^{4+3} = 128$

6)  $2^0 = 1 = 1$

7)  $3^{-2} = \frac{1}{3^2} = \frac{1}{9}$

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

9)  $2^{-2} \times 2^3 = 2^{-2+3} = 2$

10)  $2^1 = 2 = 2$

**Answers**

1. **729**

2. **36**

3.  **$\frac{1}{4}$**

4.  **$\frac{1}{16}$**

5. **128**

6. **1**

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

8. **3**

9. **2**

10. **2**



Solve each problem using the laws of exponents.

**Answers**

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

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

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

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

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

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

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

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

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

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

6)  $2^{-4} =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

7)  $(\frac{1}{3})^4 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

8)  $2^0 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

9)  $2^3 \times 2^4 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

10)  $2^3 \times 2^4 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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



Solve each problem using the laws of exponents.

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

2)  $2^1 = 2 = 2$

3)  $(2^3)^4 = 2^{3 \times 4} = 4,096$

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

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

6)  $2^{-4} = \frac{1}{2^4} = \frac{1}{16}$

7)  $(\frac{1}{3})^4 = \frac{1}{3^4} = \frac{1}{81}$

8)  $2^0 = 1 = 1$

9)  $2^3 \times 2^4 = 2^{3+4} = 128$

10)  $2^3 \times 2^4 = 2^{3+4} = 128$

**Answers**

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

2.  $2$

3.  $4,096$

4.  $1,296$

5.  $3$

6.  $\frac{1}{16}$

7.  $\frac{1}{81}$

8.  $1$

9.  $128$

10.  $128$



Solve each problem using the laws of exponents.

**Answers**

1)  $3^0 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6)  $2^1 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

8)  $(3^4)^2 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

10)  $2^4 \times 2^{-3} =$  \_\_\_\_\_  $=$  \_\_\_\_\_



Solve each problem using the laws of exponents.

1)  $3^0 = \underline{1} = \underline{1}$

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

3)  $(2 \times 3)^2 = \underline{2^2 \times 3^2} = \underline{36}$

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

5)  $2^{-2} \times 2^4 = \underline{2^{-2+4}} = \underline{4}$

6)  $2^1 = \underline{2} = \underline{2}$

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

8)  $(3^4)^2 = \underline{3^{4 \times 2}} = \underline{6,561}$

9)  $3^{-4} = \underline{\frac{1}{3^4}} = \underline{\frac{1}{81}}$

10)  $2^4 \times 2^{-3} = \underline{2^{4-3}} = \underline{2}$

**Answers**

1.  $\underline{1}$

2.  $\underline{2}$

3.  $\underline{36}$

4.  $\underline{128}$

5.  $\underline{4}$

6.  $\underline{2}$

7.  $\underline{\frac{1}{8}}$

8.  $\underline{6,561}$

9.  $\underline{\frac{1}{81}}$

10.  $\underline{2}$





Solve each problem using the laws of exponents.

**Answers**

1)  $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

1.                     

2)  $(3 \times 2)^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2.                     

3)  $2^2 \times 2^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3.                     

4)  $3^1 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4.                     

5)  $(2^4)^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5.                     

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

6.                     

7)  $3^3 \times 3^{-4} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7.                     

8)  $3^{-4} \times 3^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8.                     

9)  $2^{-3} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9.                     

10)  $(\frac{1}{2})^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10.



Solve each problem using the laws of exponents.

1)  $3^0 = \underline{1} = \underline{1}$

2)  $(3 \times 2)^2 = \underline{3^2 \times 2^2} = \underline{36}$

3)  $2^2 \times 2^4 = \underline{2^{2+4}} = \underline{64}$

4)  $3^1 = \underline{3} = \underline{3}$

5)  $(2^4)^2 = \underline{2^{4 \times 2}} = \underline{256}$

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

7)  $3^3 \times 3^{-4} = \underline{3^{3-4}} = \underline{\frac{1}{3}}$

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

9)  $2^{-3} = \underline{\frac{1}{2^3}} = \underline{\frac{1}{8}}$

10)  $(\frac{1}{2})^2 = \underline{\frac{1}{2^2}} = \underline{\frac{1}{4}}$

**Answers**

1.  $\underline{1}$

2.  $\underline{36}$

3.  $\underline{64}$

4.  $\underline{3}$

5.  $\underline{256}$

6.  $\underline{\frac{1}{3}}$

7.  $\underline{\frac{1}{3}}$

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

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

10.  $\underline{\frac{1}{4}}$

**Solve each problem using the laws of exponents.**

## Answers

1)  $(\frac{1}{2})^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

2)  $3^1 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

3)  $3^2 \times 3^{-3} =$                        $=$                      

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

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

4.

5)  $(2^3)^2 =$   $=$

5.

6)  $2^0 =$   $=$

6.

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

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

**8)**  $(2 \times 3)^3 =$   $=$

8.

9)  $3^{-4} =$   $=$

9.

10)  $3^{-3} \times 3^2 =$   $=$

10



Solve each problem using the laws of exponents.

1)  $(\frac{1}{2})^4 = \frac{1}{2^4} = \frac{1}{16}$

2)  $3^1 = 3 = 3$

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

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

5)  $(2^3)^2 = 2^{3 \times 2} = 64$

6)  $2^0 = 1 = 1$

7)  $3^2 \times 3^3 = 3^{2+3} = 243$

8)  $(2 \times 3)^3 = 2^3 \times 3^3 = 216$

9)  $3^{-4} = \frac{1}{3^4} = \frac{1}{81}$

10)  $3^{-3} \times 3^2 = 3^{-3+2} = \frac{1}{3}$

**Answers**

1.  $\frac{1}{16}$

2.  $3$

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

4.  $3$

5.  $64$

6.  $1$

7.  $243$

8.  $216$

9.  $\frac{1}{81}$

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



Solve each problem using the laws of exponents.

**Answers**

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

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

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

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

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

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

4)  $3^0 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

5)  $3^0 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

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

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

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

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

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

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

9)  $3^{-4} \times 3^2 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

10)  $2^1 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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



Solve each problem using the laws of exponents.

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

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

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

4)  $3^0 = 1 = 1$

5)  $3^0 = 1 = 1$

6)  $(\frac{1}{2})^2 = \frac{1}{2^2} = \frac{1}{4}$

7)  $(2^4)^3 = 2^{4 \times 3} = 4,096$

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

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

10)  $2^1 = 2 = 2$

**Answers**

1. **2**

2. **128**

3. **1,296**

4. **1**

5. **1**

6.  **$\frac{1}{4}$**

7. **4,096**

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

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

10. **2**



Solve each problem using the laws of exponents.

Answers

1)  $3^1 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

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

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

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

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

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

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

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

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

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

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

7)  $2^0 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

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

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

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

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

10)  $3^2 \times 3^3 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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



Solve each problem using the laws of exponents.

1)  $3^1 = \underline{3} = \underline{3}$

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

3)  $(2 \times 3)^2 = \underline{2^2 \times 3^2} = \underline{36}$

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

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

6)  $3^{-2} = \underline{\frac{1}{3^2}} = \underline{\frac{1}{9}}$

7)  $2^0 = \underline{1} = \underline{1}$

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

9)  $(\frac{1}{3})^3 = \underline{\frac{1}{3^3}} = \underline{\frac{1}{27}}$

10)  $3^2 \times 3^3 = \underline{3^{2+3}} = \underline{243}$

**Answers**

1.  $\underline{3}$

2.  $\underline{64}$

3.  $\underline{36}$

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

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

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

7.  $\underline{1}$

8.  $\underline{\frac{1}{4}}$

9.  $\underline{\frac{1}{27}}$

10.  $\underline{243}$



**Solve each problem using the laws of exponents.**

## Answers

1)  $3^2 \times 3^{-4} =$                        $=$                      

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

2)  $2^{-4} =$    $=$

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

3)  $2^0 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

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

4)  $3^1 =$  \_\_\_\_\_  $=$  \_\_\_\_\_

4.

5)  $2^2 \times 2^3 =$                        $=$                      

5.

6)  $(3 \times 2)^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6.

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

7.

8)  $3^2 \times 3^{-4} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8.

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

9.

**10)**  $(2^2)^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10.



Solve each problem using the laws of exponents.

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

2)  $2^{-4} = \frac{1}{2^4} = \frac{1}{16}$

3)  $2^0 = 1 = 1$

4)  $3^1 = 3 = 3$

5)  $2^2 \times 2^3 = 2^{2+3} = 32$

6)  $(3 \times 2)^3 = 3^3 \times 2^3 = 216$

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

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

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

10)  $(2^2)^4 = 2^{2 \times 4} = 256$

**Answers**

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

2.  $\frac{1}{16}$

3. **1**

4. **3**

5. **32**

6. **216**

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

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

9. **9**

10. **256**



Solve each problem using the laws of exponents.

**Answers**

1)  $(2^4)^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

1.                                 

2)  $3^1 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

2.                                 

3)  $(\frac{1}{2})^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

3.                                 

4)  $(\frac{1}{2})^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4.                                 

5)  $2^{-2} \times 2^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5.                                 

6)  $(2 \times 3)^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6.                                 

7)  $3^4 \times 3^{-3} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7.                                 

8)  $3^{-4} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8.                                 

9)  $2^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9.                                 

10)  $2^2 \times 2^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10.



Solve each problem using the laws of exponents.

1)  $(2^4)^2 = 2^{4 \times 2} = 256$

2)  $3^1 = 3 = 3$

3)  $(\frac{1}{2})^4 = \frac{1}{2^4} = \frac{1}{16}$

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

5)  $2^{-2} \times 2^4 = 2^{-2+4} = 4$

6)  $(2 \times 3)^3 = 2^3 \times 3^3 = 216$

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

8)  $3^{-4} = \frac{1}{3^4} = \frac{1}{81}$

9)  $2^0 = 1 = 1$

10)  $2^2 \times 2^4 = 2^{2+4} = 64$

**Answers**

1. **256**

2. **3**

3.  **$\frac{1}{16}$**

4.  **$\frac{1}{8}$**

5. **4**

6. **216**

7. **3**

8.  **$\frac{1}{81}$**

9. **1**

10. **64**