



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

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

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

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

**Answers**

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

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

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

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

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

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

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

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

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

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**