



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

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

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

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

**Answers**

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

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

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

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

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

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

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

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

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

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



Solve each problem using the laws of exponents.

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

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.  $\frac{1}{3}$