



Solve each problem using the laws of exponents.

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

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

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

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

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

6)  $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

10)  $2^3 \cdot 2^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

**Answers**

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

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

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

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

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

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

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

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

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

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



Solve each problem using the laws of exponents.

1)  $(3^4)^2 = 3^{4 \cdot 2} = 6,561$

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

3)  $3^1 = 3 = 3$

4)  $3^0 = 1 = 1$

5)  $3^{-3} = \frac{1}{3^3} = \frac{1}{27}$

6)  $3^0 = 1 = 1$

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

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

9)  $3^3 \cdot 3^{-2} = 3^{3-2} = 3$

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

Answers

1. **6,561**

2. **36**

3. **3**

4. **1**

5.  **$\frac{1}{27}$**

6. **1**

7.  **$\frac{1}{2}$**

8.  **$\frac{1}{27}$**

9. **3**

10. **128**