



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

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

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

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

**Answers**

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

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

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

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

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

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

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

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

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

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



Solve each problem using the laws of exponents.

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

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**