



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

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

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

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

**Answers**

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

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

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

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

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

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

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

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

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

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



Solve each problem using the laws of exponents.

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

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