



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) $2^2 \times 2^4 = 2^{2+4} = 64$

Answers1. **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**