



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) $2^1 = 2 = 2$

Answers1. **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**