



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

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

9) $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

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

2) $2^{-3} = \frac{1}{2^3} = \frac{1}{8}$

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

4) $3^1 = 3 = 3$

5) $(2 \times 3)^4 = 2^4 \times 3^4 = 1,296$

6) $(\frac{1}{3})^4 = \frac{1}{3^4} = \frac{1}{81}$

7) $2^4 \times 2^{-2} = 2^{4-2} = 4$

8) $2^3 \times 2^4 = 2^{3+4} = 128$

9) $3^0 = 1 = 1$

10) $3^{-2} \times 3^4 = 3^{-2+4} = 9$

Answers

1. **6,561**

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

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

4. **3**

5. **1,296**

6. **$\frac{1}{81}$**

7. **4**

8. **128**

9. **1**

10. **9**