



Solve each problem using the laws of exponents.

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

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

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

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

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

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

7) $2^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

8) $2^1 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

9) $3^{-2} \times 3^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

1) $(3^4)^3 = 3^{4 \times 3} = 531,441$

2) $3^{-2} = \frac{1}{3^2} = \frac{1}{9}$

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

4) $2^3 \times 2^{-4} = 2^{3-4} = \frac{1}{2}$

5) $2^2 \times 2^3 = 2^{2+3} = 32$

6) $3^1 = 3 = 3$

7) $2^0 = 1 = 1$

8) $2^1 = 2 = 2$

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

10) $(2 \times 3)^3 = 2^3 \times 3^3 = 216$

Answers

1. 531,441

2. $\frac{1}{9}$

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

4. $\frac{1}{2}$

5. 32

6. 3

7. 1

8. 2

9. 9

10. 216