



Solve each problem using the laws of exponents.

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

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

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

4) $2^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

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

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

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

1) $(3^2)^3 = 3^{2 \times 3} = 729$

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

3) $3^1 = 3 = 3$

4) $2^0 = 1 = 1$

5) $3^3 \times 3^2 = 3^{3+2} = 243$

6) $(2^4)^3 = 2^{4 \times 3} = 4,096$

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

8) $2^{-4} = \frac{1}{2^4} = \frac{1}{16}$

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

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

Answers

1. 729

2. 216

3. 3

4. 1

5. 243

6. 4,096

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

8. $\frac{1}{16}$

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

10. 2