



Solve each problem using the laws of exponents.

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

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

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

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

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

6) $2^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

7) $3^2 \times 3^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

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

2) $3^1 = 3 = 3$

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

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

5) $(2^3)^2 = 2^{3 \times 2} = 64$

6) $2^0 = 1 = 1$

7) $3^2 \times 3^3 = 3^{2+3} = 243$

8) $(2 \times 3)^3 = 2^3 \times 3^3 = 216$

9) $3^{-4} = \frac{1}{3^4} = \frac{1}{81}$

10) $3^{-3} \times 3^2 = 3^{-3+2} = \frac{1}{3}$

Answers

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

2. 3

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

4. 3

5. 64

6. 1

7. 243

8. 216

9. $\frac{1}{81}$

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