



Solve each problem using the laws of exponents.

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

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

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

4) $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

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

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

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

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

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

3) $3^0 = 1 = 1$

4) $3^0 = 1 = 1$

5) $2^{-2} = \frac{1}{2^2} = \frac{1}{4}$

6) $2^1 = 2 = 2$

7) $(2 \times 3)^2 = 2^2 \times 3^2 = 36$

8) $3^2 \times 3^3 = 3^{2+3} = 243$

9) $(3^2)^4 = 3^{2 \times 4} = 6,561$

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

Answers

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

2. 3

3. 1

4. 1

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

6. 2

7. 36

8. 243

9. $6,561$

10. 2



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) $2^1 = 2 = 2$

Answers

1. **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**



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

8) $2^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

2) $2^1 = \underline{2} = \underline{2}$

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

4) $(2 \times 3)^4 = \underline{2^4 \times 3^4} = \underline{1,296}$

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

6) $2^{-4} = \underline{\frac{1}{2^4}} = \underline{\frac{1}{16}}$

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

8) $2^0 = \underline{1} = \underline{1}$

9) $2^3 \times 2^4 = \underline{2^{3+4}} = \underline{128}$

10) $2^3 \times 2^4 = \underline{2^{3+4}} = \underline{128}$

Answers

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

2. $\underline{2}$

3. $\underline{4,096}$

4. $\underline{1,296}$

5. $\underline{3}$

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

7. $\underline{\frac{1}{81}}$

8. $\underline{1}$

9. $\underline{128}$

10. $\underline{128}$



Solve each problem using the laws of exponents.

1) $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

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

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

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

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

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

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

1) $3^0 = \underline{1} = \underline{1}$

2) $2^1 = \underline{2} = \underline{2}$

3) $(2 \times 3)^2 = \underline{2^2 \times 3^2} = \underline{36}$

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

5) $2^{-2} \times 2^4 = \underline{2^{-2+4}} = \underline{4}$

6) $2^1 = \underline{2} = \underline{2}$

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

8) $(3^4)^2 = \underline{3^{4 \times 2}} = \underline{6,561}$

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

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

Answers

1. 1

2. 2

3. 36

4. 128

5. 4

6. 2

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

8. 6,561

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

10. 2



Solve each problem using the laws of exponents.

1) $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

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

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

7) $3^3 \times 3^{-4} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

1) $3^0 = \underline{1} = \underline{1}$

2) $(3 \times 2)^2 = \underline{3^2 \times 2^2} = \underline{36}$

3) $2^2 \times 2^4 = \underline{2^{2+4}} = \underline{64}$

4) $3^1 = \underline{3} = \underline{3}$

5) $(2^4)^2 = \underline{2^{4 \times 2}} = \underline{256}$

6) $3^{-3} \times 3^2 = \underline{3^{-3+2}} = \underline{\frac{1}{3}}$

7) $3^3 \times 3^{-4} = \underline{3^{3-4}} = \underline{\frac{1}{3}}$

8) $3^{-4} \times 3^2 = \underline{3^{-4+2}} = \underline{\frac{1}{9}}$

9) $2^{-3} = \underline{\frac{1}{2^3}} = \underline{\frac{1}{8}}$

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

Answers

1. 1

2. 36

3. 64

4. 3

5. 256

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

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

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

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

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



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. $\frac{1}{3}$



Solve each problem using the laws of exponents.

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

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

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

4) $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5) $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

7) $(2^4)^3 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

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

3) $(3 \times 2)^4 = \underline{3^4 \times 2^4} = \underline{1,296}$

4) $3^0 = \underline{1} = \underline{1}$

5) $3^0 = \underline{1} = \underline{1}$

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

7) $(2^4)^3 = \underline{2^{4 \times 3}} = \underline{4,096}$

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

9) $3^{-4} \times 3^2 = \underline{3^{-4+2}} = \underline{\frac{1}{9}}$

10) $2^1 = \underline{2} = \underline{2}$

Answers

1. $\underline{2}$

2. $\underline{128}$

3. $\underline{1,296}$

4. $\underline{1}$

5. $\underline{1}$

6. $\underline{\frac{1}{4}}$

7. $\underline{4,096}$

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

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

10. $\underline{2}$



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

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

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

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

1) $3^1 = \underline{3} = \underline{3}$

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

3) $(2 \times 3)^2 = \underline{2^2 \times 3^2} = \underline{36}$

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

5) $(\frac{1}{3})^2 = \underline{\frac{1}{3^2}} = \underline{\frac{1}{9}}$

6) $3^{-2} = \underline{\frac{1}{3^2}} = \underline{\frac{1}{9}}$

7) $2^0 = \underline{1} = \underline{1}$

8) $2^{-4} \times 2^2 = \underline{2^{-4+2}} = \underline{\frac{1}{4}}$

9) $(\frac{1}{3})^3 = \underline{\frac{1}{3^3}} = \underline{\frac{1}{27}}$

10) $3^2 \times 3^3 = \underline{3^{2+3}} = \underline{243}$

Answers

1. $\underline{3}$

2. $\underline{64}$

3. $\underline{36}$

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

5. $\underline{\frac{1}{9}}$

6. $\underline{\frac{1}{9}}$

7. $\underline{1}$

8. $\underline{\frac{1}{4}}$

9. $\underline{\frac{1}{27}}$

10. $\underline{243}$



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

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

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

10) $(2^2)^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

1) $3^2 \times 3^{-4} = 3^{2-4} = \frac{1}{9}$

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

3) $2^0 = 1 = 1$

4) $3^1 = 3 = 3$

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

6) $(3 \times 2)^3 = 3^3 \times 2^3 = 216$

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

8) $3^2 \times 3^{-4} = 3^{2-4} = \frac{1}{9}$

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

10) $(2^2)^4 = 2^{2 \times 4} = 256$

Answers

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

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

3. **1**

4. **3**

5. **32**

6. **216**

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

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

9. **9**

10. **256**



Solve each problem using the laws of exponents.

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

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

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

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

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

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

7) $3^4 \times 3^{-3} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

1) $(2^4)^2 = 2^{4 \times 2} = 256$

2) $3^1 = 3 = 3$

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

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

5) $2^{-2} \times 2^4 = 2^{-2+4} = 4$

6) $(2 \times 3)^3 = 2^3 \times 3^3 = 216$

7) $3^4 \times 3^{-3} = 3^{4-3} = 3$

8) $3^{-4} = \frac{1}{3^4} = \frac{1}{81}$

9) $2^0 = 1 = 1$

10) $2^2 \times 2^4 = 2^{2+4} = 64$

Answers

1. 256

2. 3

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

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

5. 4

6. 216

7. 3

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

9. 1

10. 64