



Solve each problem using the laws of exponents.

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

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

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

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

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

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

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

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

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

10) $3^1 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

Answers

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____



Solve each problem using the laws of exponents.

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

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

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

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

5) $(3^3)^4 = \underline{3^{3 \times 4}} = \underline{531,441}$

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

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

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

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

10) $3^1 = \underline{3} = \underline{3}$

Answers

1. 1,296

2. 1

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

4. 256

5. 531,441

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

7. 3

8. 243

9. 9

10. 3