Solving Using the Laws of Exponents

Name:

Solve each problem using the laws of exponents.

1) $2^2 \times 2^4 =$ _____ = _____

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

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

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

5) $2^0 =$ _____ = _____

6) $3^3 \times 3^{-2} =$ _____ = _____

7) $(2^2)^3 =$ _____ = _____

8) $2^1 =$ _____ = _____

9) $(3 \times 2)^2 =$ _____ = _____

10) $2^{-4} =$ _____ = _____

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

1-10	90	80	70	60	50	40	30	20	10	0

Solving Using the Laws of Exponents Name: **Answer Key**

Solve each problem using the laws of exponents.

1) $2^2 \times 2^4 =$ 2^{2+4} = 64

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

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

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

5) $2^0 =$ 1 = 1

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

7) $(2^2)^3 =$ $2^{2 \times 3}$ = 64

8) $2^1 =$ 2 = 2

9) $(3 \times 2)^2 =$ $3^2 \times 2^2$ = 36

10) $2^{-4} =$ $\frac{1}{2^4}$ = $\frac{1}{16}$

Answers

1. 64
2. 4
3. $\frac{1}{81}$
4. $\frac{1}{4}$
5. 1
6. 3
7. 64
8. 2
9. 36
10. $\frac{1}{16}$

1-10	90	80	70	60	50	40	30	20	10	0