Solving Using the Laws of Exponents

Name:

Solve each problem using the laws of exponents.

1) $2^0 =$ _____ = _____

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

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

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

5) $(3 \times 2)^2 =$ _____ = _____

6) $(2^3)^4 =$ _____ = _____

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

8) $2^2 \times 2^3 =$ _____ = _____

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

10) $2^1 =$ _____ = _____

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) $2^0 =$ 1 = 1

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

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

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

5) $(3 \times 2)^2 =$ $3^2 \times 2^2$ = 36

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

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

8) $2^2 \times 2^3 =$ 2^{2+3} = 32

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

10) $2^1 =$ 2 = 2

Answers

1. 1
2. $\frac{1}{9}$
3. 36
4. $\frac{1}{4}$
5. 36
6. 4,096
7. 3
8. 32
9. $\frac{1}{2}$
10. 2

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