Solving Using the Laws of Exponents

Name:

Solve each problem using the laws of exponents.

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

2) $2^1 =$ _____ = _____

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

4) $3^2 \times 3^4 =$ _____ = _____

5) $3^4 \times 3^{-3} =$ _____ = _____

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

7) $2^{-3} \times 2^4 =$ _____ = _____

8) $3^0 =$ _____ = _____

9) $2^{-2} =$ _____ = _____

10) $2^0 =$ _____ = _____

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

2) $2^1 =$ 2 = 2

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

4) $3^2 \times 3^4 =$ 3^{2+4} = 729

5) $3^4 \times 3^{-3} =$ 3^{4-3} = 3

6) $(3^3)^2 =$ $3^{3 \times 2}$ = 729

7) $2^{-3} \times 2^4 =$ 2^{-3+4} = 2

8) $3^0 =$ 1 = 1

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

10) $2^0 =$ 1 = 1

Answers

1. $\frac{1}{81}$
2. 2
3. 36
4. 729
5. 3
6. 729
7. 2
8. 1
9. $\frac{1}{4}$
10. 1

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