# Solving Using the Laws of Exponents

Name:

**Solve each problem using the laws of exponents.**

**1)** $3^0 =$ _____ = _____

**2)** $2^1 =$ _____ = _____

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

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

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

**6)** $2^1 =$ _____ = _____

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

**8)** $(3^4)^2 =$ _____ = _____

**9)** $3^{-4} =$ _____ = _____

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

**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)** $3^0 =$ 1 = 1

**2)** $2^1 =$ 2 = 2

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

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

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

**6)** $2^1 =$ 2 = 2

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

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

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

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



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