

## Solving Using the Laws of Exponents

Name: \_\_\_\_\_

Solve each problem using the laws of exponents.

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

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

3)  $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

4)  $3^0 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

5)  $2^{-2} = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

6)  $2^1 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

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

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

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

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

**Answers**

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

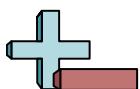
6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



# Solving Using the Laws of Exponents

Name: **Answer Key**

Solve each problem using the laws of exponents.

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

1.  $\underline{\quad \frac{1}{9} \quad}$

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

2.  $\underline{\quad 3 \quad}$

3)  $3^0 = \underline{\quad 1 \quad} = \underline{\quad 1 \quad}$

3.  $\underline{\quad 1 \quad}$

4)  $3^0 = \underline{\quad 1 \quad} = \underline{\quad 1 \quad}$

4.  $\underline{\quad 1 \quad}$

5)  $2^{-2} = \underline{\quad \frac{1}{2^2} \quad} = \underline{\quad \frac{1}{4} \quad}$

5.  $\underline{\quad \frac{1}{4} \quad}$

6)  $2^1 = \underline{\quad 2 \quad} = \underline{\quad 2 \quad}$

6.  $\underline{\quad 2 \quad}$

7)  $(2 \times 3)^2 = \underline{\quad 2^2 \times 3^2 \quad} = \underline{\quad 36 \quad}$

7.  $\underline{\quad 36 \quad}$

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

8.  $\underline{\quad 243 \quad}$

9)  $(3^2)^4 = \underline{\quad 3^{2 \times 4} \quad} = \underline{\quad 6,561 \quad}$

9.  $\underline{\quad 6,561 \quad}$

10)  $2^3 \times 2^{-2} = \underline{\quad 2^{3-2} \quad} = \underline{\quad 2 \quad}$

10.  $\underline{\quad 2 \quad}$

## Answers

$\frac{1}{9}$

3

1

1

$\frac{1}{4}$

2

36

243

6,561

2