

Introduction to Powers and Exponents

Name: _____

Date: _____

Remember: In 5^3 , the **base** is 5 and the **exponent** is 3. This means $5 \times 5 \times 5$.

Part A: Identify the Base and Exponent

For each power, write the base and exponent.

1. 7^2 Base: _____ Exponent: _____

2. 4^5 Base: _____ Exponent: _____

3. 10^3 Base: _____ Exponent: _____

4. 2^6 Base: _____ Exponent: _____

5. 9^1 Base: _____ Exponent: _____

6. 12^4 Base: _____ Exponent: _____

Part B: Write in Exponent Form

Write each repeated multiplication using exponents.

1. $3 \times 3 \times 3 \times 3 =$ _____

2. $6 \times 6 =$ _____

3. $2 \times 2 \times 2 \times 2 \times 2 =$ _____

4. $8 \times 8 \times 8 =$ _____

5. $5 \times 5 \times 5 \times 5 \times 5 \times 5 =$ _____

6. $11 \times 11 \times 11 \times 11 =$ _____

Part C: Write as Repeated Multiplication

Expand each power to show the repeated multiplication.

1. $4^3 =$ _____

2. $7^2 =$ _____

3. $2^8 =$ _____

4. $10^4 =$ _____

5. $3^5 =$ _____

6. $9^3 =$ _____

Part D: Calculate the Value

Work out the value of each power.

1. $2^3 =$ _____

3. $10^2 =$ _____

5. $6^2 =$ _____

2. $5^2 =$ _____

4. $3^4 =$ _____

6. $2^5 =$ _____