

Quotient Exponent Rule (A)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{7^7}{7^3}$

2. $\frac{4^8}{4^6}$

3. $\frac{9^4}{9^3}$

4. $\frac{8^6}{8^2}$

5. $\frac{4^8}{4^7}$

6. $\frac{8^8}{8^7}$

7. $\frac{6^6}{6^5}$

8. $\frac{8^7}{8^6}$

9. $\frac{5^9}{5^5}$

10. $\frac{8^9}{8^6}$

Quotient Exponent Rule (A) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{7^7}{7^3}$

$$7^{7-3} = 7^4$$

2. $\frac{4^8}{4^6}$

$$4^{8-6} = 4^2$$

3. $\frac{9^4}{9^3}$

$$9^{4-3} = 9^1 = 9$$

4. $\frac{8^6}{8^2}$

$$8^{6-2} = 8^4$$

5. $\frac{4^8}{4^7}$

$$4^{8-7} = 4^1 = 4$$

6. $\frac{8^8}{8^7}$

$$8^{8-7} = 8^1 = 8$$

7. $\frac{6^6}{6^5}$

$$6^{6-5} = 6^1 = 6$$

8. $\frac{8^7}{8^6}$

$$8^{7-6} = 8^1 = 8$$

9. $\frac{5^9}{5^5}$

$$5^{9-5} = 5^4$$

10. $\frac{8^9}{8^6}$

$$8^{9-6} = 8^3$$

Quotient Exponent Rule (B)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{4^7}{4^5}$

2. $\frac{8^7}{8^4}$

3. $\frac{6^7}{6^7}$

4. $\frac{4^7}{4^4}$

5. $\frac{5^6}{5^3}$

6. $\frac{8^8}{8^8}$

7. $\frac{8^9}{8^4}$

8. $\frac{8^5}{8^2}$

9. $\frac{8^9}{8^2}$

10. $\frac{4^9}{4^8}$

Quotient Exponent Rule (B) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{4^7}{4^5}$

$$4^{7-5} = 4^2$$

2. $\frac{8^7}{8^4}$

$$8^{7-4} = 8^3$$

3. $\frac{6^7}{6^7}$

$$6^{7-7} = 6^0 = 1$$

4. $\frac{4^7}{4^4}$

$$4^{7-4} = 4^3$$

5. $\frac{5^6}{5^3}$

$$5^{6-3} = 5^3$$

6. $\frac{8^8}{8^8}$

$$8^{8-8} = 8^0 = 1$$

7. $\frac{8^9}{8^4}$

$$8^{9-4} = 8^5$$

8. $\frac{8^5}{8^2}$

$$8^{5-2} = 8^3$$

9. $\frac{8^9}{8^2}$

$$8^{9-2} = 8^7$$

10. $\frac{4^9}{4^8}$

$$4^{9-8} = 4^1 = 4$$

Quotient Exponent Rule (C)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{9^8}{9^2}$

2. $\frac{5^7}{5^2}$

3. $\frac{5^6}{5^2}$

4. $\frac{4^6}{4^2}$

5. $\frac{3^9}{3^2}$

6. $\frac{7^7}{7^4}$

7. $\frac{9^6}{9^2}$

8. $\frac{4^9}{4^2}$

9. $\frac{6^7}{6^6}$

10. $\frac{3^3}{3^3}$

Quotient Exponent Rule (C) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{9^8}{9^2}$

$$9^{8-2} = 9^6$$

2. $\frac{5^7}{5^2}$

$$5^{7-2} = 5^5$$

3. $\frac{5^6}{5^2}$

$$5^{6-2} = 5^4$$

4. $\frac{4^6}{4^2}$

$$4^{6-2} = 4^4$$

5. $\frac{3^9}{3^2}$

$$3^{9-2} = 3^7$$

6. $\frac{7^7}{7^4}$

$$7^{7-4} = 7^3$$

7. $\frac{9^6}{9^2}$

$$9^{6-2} = 9^4$$

8. $\frac{4^9}{4^2}$

$$4^{9-2} = 4^7$$

9. $\frac{6^7}{6^6}$

$$6^{7-6} = 6^1 = 6$$

10. $\frac{3^3}{3^3}$

$$3^{3-3} = 3^0 = 1$$

Quotient Exponent Rule (D)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{2^8}{2^5}$

2. $\frac{8^5}{8^5}$

3. $\frac{9^8}{9^6}$

4. $\frac{7^7}{7^6}$

5. $\frac{9^9}{9^2}$

6. $\frac{6^9}{6^6}$

7. $\frac{8^8}{8^7}$

8. $\frac{6^7}{6^5}$

9. $\frac{9^7}{9^4}$

10. $\frac{9^3}{9^3}$

Quotient Exponent Rule (D) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{2^8}{2^5}$

$$2^{8-5} = 2^3$$

2. $\frac{8^5}{8^5}$

$$8^{5-5} = 8^0 = 1$$

3. $\frac{9^8}{9^6}$

$$9^{8-6} = 9^2$$

4. $\frac{7^7}{7^6}$

$$7^{7-6} = 7^1 = 7$$

5. $\frac{9^9}{9^2}$

$$9^{9-2} = 9^7$$

6. $\frac{6^9}{6^6}$

$$6^{9-6} = 6^3$$

7. $\frac{8^8}{8^7}$

$$8^{8-7} = 8^1 = 8$$

8. $\frac{6^7}{6^5}$

$$6^{7-5} = 6^2$$

9. $\frac{9^7}{9^4}$

$$9^{7-4} = 9^3$$

10. $\frac{9^3}{9^3}$

$$9^{3-3} = 9^0 = 1$$

Quotient Exponent Rule (E)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{6^9}{6^3}$

2. $\frac{2^6}{2^2}$

3. $\frac{3^9}{3^3}$

4. $\frac{5^7}{5^6}$

5. $\frac{9^5}{9^2}$

6. $\frac{5^9}{5^8}$

7. $\frac{3^9}{3^7}$

8. $\frac{6^5}{6^5}$

9. $\frac{2^9}{2^6}$

10. $\frac{5^9}{5^4}$

Quotient Exponent Rule (E) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{6^9}{6^3}$

$$6^{9-3} = 6^6$$

2. $\frac{2^6}{2^2}$

$$2^{6-2} = 2^4$$

3. $\frac{3^9}{3^3}$

$$3^{9-3} = 3^6$$

4. $\frac{5^7}{5^6}$

$$5^{7-6} = 5^1 = 5$$

5. $\frac{9^5}{9^2}$

$$9^{5-2} = 9^3$$

6. $\frac{5^9}{5^8}$

$$5^{9-8} = 5^1 = 5$$

7. $\frac{3^9}{3^7}$

$$3^{9-7} = 3^2$$

8. $\frac{6^5}{6^5}$

$$6^{5-5} = 6^0 = 1$$

9. $\frac{2^9}{2^6}$

$$2^{9-6} = 2^3$$

10. $\frac{5^9}{5^4}$

$$5^{9-4} = 5^5$$

Quotient Exponent Rule (F)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{4^9}{4^9}$

2. $\frac{6^6}{6^2}$

3. $\frac{3^5}{3^5}$

4. $\frac{5^9}{5^3}$

5. $\frac{2^6}{2^2}$

6. $\frac{9^5}{9^2}$

7. $\frac{2^7}{2^5}$

8. $\frac{7^9}{7^7}$

9. $\frac{8^5}{8^3}$

10. $\frac{8^8}{8^6}$

Quotient Exponent Rule (F) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{4^9}{4^9}$

$$4^{9-9} = 4^0 = 1$$

2. $\frac{6^6}{6^2}$

$$6^{6-2} = 6^4$$

3. $\frac{3^5}{3^5}$

$$3^{5-5} = 3^0 = 1$$

4. $\frac{5^9}{5^3}$

$$5^{9-3} = 5^6$$

5. $\frac{2^6}{2^2}$

$$2^{6-2} = 2^4$$

6. $\frac{9^5}{9^2}$

$$9^{5-2} = 9^3$$

7. $\frac{2^7}{2^5}$

$$2^{7-5} = 2^2$$

8. $\frac{7^9}{7^7}$

$$7^{9-7} = 7^2$$

9. $\frac{8^5}{8^3}$

$$8^{5-3} = 8^2$$

10. $\frac{8^8}{8^6}$

$$8^{8-6} = 8^2$$

Quotient Exponent Rule (G)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{2^8}{2^6}$

2. $\frac{6^8}{6^4}$

3. $\frac{9^7}{9^5}$

4. $\frac{3^8}{3^7}$

5. $\frac{8^8}{8^5}$

6. $\frac{3^7}{3^2}$

7. $\frac{3^6}{3^6}$

8. $\frac{3^5}{3^5}$

9. $\frac{6^6}{6^4}$

10. $\frac{2^9}{2^5}$

Quotient Exponent Rule (G) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{2^8}{2^6}$

$$2^{8-6} = 2^2$$

2. $\frac{6^8}{6^4}$

$$6^{8-4} = 6^4$$

3. $\frac{9^7}{9^5}$

$$9^{7-5} = 9^2$$

4. $\frac{3^8}{3^7}$

$$3^{8-7} = 3^1 = 3$$

5. $\frac{8^8}{8^5}$

$$8^{8-5} = 8^3$$

6. $\frac{3^7}{3^2}$

$$3^{7-2} = 3^5$$

7. $\frac{3^6}{3^6}$

$$3^{6-6} = 3^0 = 1$$

8. $\frac{3^5}{3^5}$

$$3^{5-5} = 3^0 = 1$$

9. $\frac{6^6}{6^4}$

$$6^{6-4} = 6^2$$

10. $\frac{2^9}{2^5}$

$$2^{9-5} = 2^4$$

Quotient Exponent Rule (H)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{4^8}{4^5}$

2. $\frac{8^8}{8^7}$

3. $\frac{4^7}{4^6}$

4. $\frac{9^7}{9^6}$

5. $\frac{2^4}{2^2}$

6. $\frac{5^7}{5^5}$

7. $\frac{4^6}{4^2}$

8. $\frac{8^6}{8^4}$

9. $\frac{8^4}{8^2}$

10. $\frac{5^4}{5^2}$

Quotient Exponent Rule (H) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{4^8}{4^5}$

$$4^{8-5} = 4^3$$

2. $\frac{8^8}{8^7}$

$$8^{8-7} = 8^1 = 8$$

3. $\frac{4^7}{4^6}$

$$4^{7-6} = 4^1 = 4$$

4. $\frac{9^7}{9^6}$

$$9^{7-6} = 9^1 = 9$$

5. $\frac{2^4}{2^2}$

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

6. $\frac{5^7}{5^5}$

$$5^{7-5} = 5^2$$

7. $\frac{4^6}{4^2}$

$$4^{6-2} = 4^4$$

8. $\frac{8^6}{8^4}$

$$8^{6-4} = 8^2$$

9. $\frac{8^4}{8^2}$

$$8^{4-2} = 8^2$$

10. $\frac{5^4}{5^2}$

$$5^{4-2} = 5^2$$

Quotient Exponent Rule (I)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{8^6}{8^2}$

2. $\frac{6^7}{6^3}$

3. $\frac{9^4}{9^2}$

4. $\frac{9^8}{9^8}$

5. $\frac{3^8}{3^5}$

6. $\frac{7^7}{7^3}$

7. $\frac{2^8}{2^5}$

8. $\frac{5^9}{5^3}$

9. $\frac{7^6}{7^5}$

10. $\frac{7^7}{7^2}$

Quotient Exponent Rule (I) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{8^6}{8^2}$

$$8^{6-2} = 8^4$$

2. $\frac{6^7}{6^3}$

$$6^{7-3} = 6^4$$

3. $\frac{9^4}{9^2}$

$$9^{4-2} = 9^2$$

4. $\frac{9^8}{9^8}$

$$9^{8-8} = 9^0 = 1$$

5. $\frac{3^8}{3^5}$

$$3^{8-5} = 3^3$$

6. $\frac{7^7}{7^3}$

$$7^{7-3} = 7^4$$

7. $\frac{2^8}{2^5}$

$$2^{8-5} = 2^3$$

8. $\frac{5^9}{5^3}$

$$5^{9-3} = 5^6$$

9. $\frac{7^6}{7^5}$

$$7^{6-5} = 7^1 = 7$$

10. $\frac{7^7}{7^2}$

$$7^{7-2} = 7^5$$

Quotient Exponent Rule (J)

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{3^9}{3^7}$

2. $\frac{9^8}{9^5}$

3. $\frac{8^9}{8^5}$

4. $\frac{2^9}{2^2}$

5. $\frac{7^7}{7^4}$

6. $\frac{8^7}{8^2}$

7. $\frac{7^4}{7^2}$

8. $\frac{6^6}{6^3}$

9. $\frac{6^8}{6^4}$

10. $\frac{3^8}{3^4}$

Quotient Exponent Rule (J) Answers

Name: _____

Date: _____

Score: _____

Simplify each expression.

1. $\frac{3^9}{3^7}$

$$3^{9-7} = 3^2$$

2. $\frac{9^8}{9^5}$

$$9^{8-5} = 9^3$$

3. $\frac{8^9}{8^5}$

$$8^{9-5} = 8^4$$

4. $\frac{2^9}{2^2}$

$$2^{9-2} = 2^7$$

5. $\frac{7^7}{7^4}$

$$7^{7-4} = 7^3$$

6. $\frac{8^7}{8^2}$

$$8^{7-2} = 8^5$$

7. $\frac{7^4}{7^2}$

$$7^{4-2} = 7^2$$

8. $\frac{6^6}{6^3}$

$$6^{6-3} = 6^3$$

9. $\frac{6^8}{6^4}$

$$6^{8-4} = 6^4$$

10. $\frac{3^8}{3^4}$

$$3^{8-4} = 3^4$$