

Dividing Exponents (A)

Simplify each expression.

1. $\frac{9^1}{9^5}$

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

3. $\frac{(-2)^{-8}}{(-2)^9}$

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

5. $\frac{(-7)^7}{(-7)^7}$

6. $\frac{(-6)^{-3}}{(-6)^4}$

7. $\frac{4^{-6}}{4^0}$

8. $\frac{9^1}{9^5}$

9. $\frac{(-2)^{-4}}{(-2)^3}$

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

Dividing Exponents (A) Answers

Simplify each expression.

$$1. \frac{9^1}{9^5}$$

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

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

$$= 9^0 = 1$$

$$3. \frac{(-2)^{-8}}{(-2)^9}$$

$$= (-2)^{-17} = \frac{1}{(-2)^{17}}$$

$$4. \frac{2^5}{2^6}$$

$$= 2^{-1} = \frac{1}{2}$$

$$5. \frac{(-7)^7}{(-7)^7}$$

$$= (-7)^0 = 1$$

$$6. \frac{(-6)^{-3}}{(-6)^4}$$

$$= (-6)^{-7} = \frac{1}{(-6)^7}$$

$$7. \frac{4^{-6}}{4^0}$$

$$= 4^{-6} = \frac{1}{4^6}$$

$$8. \frac{9^1}{9^5}$$

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

$$9. \frac{(-2)^{-4}}{(-2)^3}$$

$$= (-2)^{-7} = \frac{1}{(-2)^7}$$

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

$$= 8^0 = 1$$

Dividing Exponents (B)

Simplify each expression.

1. $\frac{(-6)^6}{(-6)^9}$

2. $\frac{8^{-1}}{8^7}$

3. $\frac{(-7)^{-7}}{(-7)^{-4}}$

4. $\frac{(-6)^3}{(-6)^6}$

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

6. $\frac{2^{-1}}{2^4}$

7. $\frac{(-5)^{-5}}{(-5)^{-1}}$

8. $\frac{(-2)^{-5}}{(-2)^6}$

9. $\frac{(-8)^{-2}}{(-8)^5}$

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

Dividing Exponents (B) Answers

Simplify each expression.

$$1. \frac{(-6)^6}{(-6)^9}$$

$$= (-6)^{-3} = \frac{1}{(-6)^3}$$

$$2. \frac{8^{-1}}{8^7}$$

$$= 8^{-8} = \frac{1}{8^8}$$

$$3. \frac{(-7)^{-7}}{(-7)^{-4}}$$

$$= (-7)^{-3} = \frac{1}{(-7)^3}$$

$$4. \frac{(-6)^3}{(-6)^6}$$

$$= (-6)^{-3} = \frac{1}{(-6)^3}$$

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

$$= 4^{-18} = \frac{1}{4^{18}}$$

$$6. \frac{2^{-1}}{2^4}$$

$$= 2^{-5} = \frac{1}{2^5}$$

$$7. \frac{(-5)^{-5}}{(-5)^{-1}}$$

$$= (-5)^{-4} = \frac{1}{(-5)^4}$$

$$8. \frac{(-2)^{-5}}{(-2)^6}$$

$$= (-2)^{-11} = \frac{1}{(-2)^{11}}$$

$$9. \frac{(-8)^{-2}}{(-8)^5}$$

$$= (-8)^{-7} = \frac{1}{(-8)^7}$$

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

$$= 7^0 = 1$$

Dividing Exponents (C)

Simplify each expression.

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

2. $\frac{(-8)^{-6}}{(-8)^3}$

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

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

5. $\frac{(-7)^3}{(-7)^9}$

6. $\frac{(-8)^8}{(-8)^8}$

7. $\frac{(-2)^6}{(-2)^7}$

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

9. $\frac{5^{-1}}{5^3}$

10. $\frac{(-2)^7}{(-2)^9}$

Dividing Exponents (C) Answers

Simplify each expression.

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

$$= 4^{-3} = \frac{1}{4^3}$$

$$2. \frac{(-8)^{-6}}{(-8)^3}$$

$$= (-8)^{-9} = \frac{1}{(-8)^9}$$

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

$$= 5^0 = 1$$

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

$$= 5^{-1} = \frac{1}{5}$$

$$5. \frac{(-7)^3}{(-7)^9}$$

$$= (-7)^{-6} = \frac{1}{(-7)^6}$$

$$6. \frac{(-8)^8}{(-8)^8}$$

$$= (-8)^0 = 1$$

$$7. \frac{(-2)^6}{(-2)^7}$$

$$= (-2)^{-1} = \frac{1}{-2}$$

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

$$= 6^{-3} = \frac{1}{6^3}$$

$$9. \frac{5^{-1}}{5^3}$$

$$= 5^{-4} = \frac{1}{5^4}$$

$$10. \frac{(-2)^7}{(-2)^9}$$

$$= (-2)^{-2} = \frac{1}{(-2)^2}$$

Dividing Exponents (D)

Simplify each expression.

1. $\frac{5^{-6}}{5^0}$

2. $\frac{(-7)^4}{(-7)^5}$

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

4. $\frac{(-5)^1}{(-5)^6}$

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

6. $\frac{(-7)^{-3}}{(-7)^0}$

7. $\frac{(-3)^3}{(-3)^9}$

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

9. $\frac{(-8)^{-3}}{(-8)^0}$

10. $\frac{(-2)^8}{(-2)^9}$

Dividing Exponents (D) Answers

Simplify each expression.

$$1. \frac{5^{-6}}{5^0}$$

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

$$2. \frac{(-7)^4}{(-7)^5}$$

$$= (-7)^{-1} = \frac{1}{-7}$$

$$3. \frac{8^{-2}}{8^5}$$

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

$$4. \frac{(-5)^1}{(-5)^6}$$

$$= (-5)^{-5} = \frac{1}{(-5)^5}$$

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

$$= 7^{-13} = \frac{1}{7^{13}}$$

$$6. \frac{(-7)^{-3}}{(-7)^0}$$

$$= (-7)^{-3} = \frac{1}{(-7)^3}$$

$$7. \frac{(-3)^3}{(-3)^9}$$

$$= (-3)^{-6} = \frac{1}{(-3)^6}$$

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

$$= 8^{-3} = \frac{1}{8^3}$$

$$9. \frac{(-8)^{-3}}{(-8)^0}$$

$$= (-8)^{-3} = \frac{1}{(-8)^3}$$

$$10. \frac{(-2)^8}{(-2)^9}$$

$$= (-2)^{-1} = \frac{1}{-2}$$

Dividing Exponents (E)

Simplify each expression.

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

2. $\frac{(-3)^{-8}}{(-3)^3}$

3. $\frac{(-5)^7}{(-5)^7}$

4. $\frac{(-9)^{-9}}{(-9)^{-5}}$

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

6. $\frac{(-2)^2}{(-2)^3}$

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

8. $\frac{(-6)^8}{(-6)^9}$

9. $\frac{(-9)^{-4}}{(-9)^1}$

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

Dividing Exponents (E) Answers

Simplify each expression.

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

$$= 9^0 = 1$$

$$2. \frac{(-3)^{-8}}{(-3)^3}$$

$$= (-3)^{-11} = \frac{1}{(-3)^{11}}$$

$$3. \frac{(-5)^7}{(-5)^7}$$

$$= (-5)^0 = 1$$

$$4. \frac{(-9)^{-9}}{(-9)^{-5}}$$

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

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

$$= 2^{-11} = \frac{1}{2^{11}}$$

$$6. \frac{(-2)^2}{(-2)^3}$$

$$= (-2)^{-1} = \frac{1}{-2}$$

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

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

$$8. \frac{(-6)^8}{(-6)^9}$$

$$= (-6)^{-1} = \frac{1}{-6}$$

$$9. \frac{(-9)^{-4}}{(-9)^1}$$

$$= (-9)^{-5} = \frac{1}{(-9)^5}$$

$$10. \frac{3^1}{3^7}$$

$$= 3^{-6} = \frac{1}{3^6}$$

Dividing Exponents (F)

Simplify each expression.

1. $\frac{(-8)^{-6}}{(-8)^{-6}}$

2. $\frac{(-5)^{-3}}{(-5)^0}$

3. $\frac{(-9)^8}{(-9)^9}$

4. $\frac{(-4)^3}{(-4)^8}$

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

6. $\frac{(-6)^3}{(-6)^3}$

7. $\frac{(-3)^1}{(-3)^6}$

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

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

10. $\frac{(-9)^6}{(-9)^7}$

Dividing Exponents (F) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & \frac{(-8)^{-6}}{(-8)^{-6}} \\ & = (-8)^0 = 1 \end{aligned}$$

$$\begin{aligned} 2. \quad & \frac{(-5)^{-3}}{(-5)^0} \\ & = (-5)^{-3} = \frac{1}{(-5)^3} \end{aligned}$$

$$\begin{aligned} 3. \quad & \frac{(-9)^8}{(-9)^9} \\ & = (-9)^{-1} = \frac{1}{-9} \end{aligned}$$

$$\begin{aligned} 4. \quad & \frac{(-4)^3}{(-4)^8} \\ & = (-4)^{-5} = \frac{1}{(-4)^5} \end{aligned}$$

$$\begin{aligned} 5. \quad & \frac{4^{-5}}{4^6} \\ & = 4^{-11} = \frac{1}{4^{11}} \end{aligned}$$

$$\begin{aligned} 6. \quad & \frac{(-6)^3}{(-6)^3} \\ & = (-6)^0 = 1 \end{aligned}$$

$$\begin{aligned} 7. \quad & \frac{(-3)^1}{(-3)^6} \\ & = (-3)^{-5} = \frac{1}{(-3)^5} \end{aligned}$$

$$\begin{aligned} 8. \quad & \frac{9^3}{9^6} \\ & = 9^{-3} = \frac{1}{9^3} \end{aligned}$$

$$\begin{aligned} 9. \quad & \frac{6^2}{6^4} \\ & = 6^{-2} = \frac{1}{6^2} \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{(-9)^6}{(-9)^7} \\ & = (-9)^{-1} = \frac{1}{-9} \end{aligned}$$

Dividing Exponents (G)

Simplify each expression.

1. $\frac{(-9)^2}{(-9)^2}$

2. $\frac{(-6)^{-4}}{(-6)^{-4}}$

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

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

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

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

7. $\frac{(-3)^0}{(-3)^0}$

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

9. $\frac{2^{-5}}{2^0}$

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

Dividing Exponents (G) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & \frac{(-9)^2}{(-9)^2} \\ & = (-9)^0 = 1 \end{aligned}$$

$$\begin{aligned} 2. \quad & \frac{(-6)^{-4}}{(-6)^{-4}} \\ & = (-6)^0 = 1 \end{aligned}$$

$$\begin{aligned} 3. \quad & \frac{2^{-9}}{2^{-2}} \\ & = 2^{-7} = \frac{1}{2^7} \end{aligned}$$

$$\begin{aligned} 4. \quad & \frac{2^{-9}}{2^5} \\ & = 2^{-14} = \frac{1}{2^{14}} \end{aligned}$$

$$\begin{aligned} 5. \quad & \frac{4^3}{4^5} \\ & = 4^{-2} = \frac{1}{4^2} \end{aligned}$$

$$\begin{aligned} 6. \quad & \frac{5^7}{5^7} \\ & = 5^0 = 1 \end{aligned}$$

$$\begin{aligned} 7. \quad & \frac{(-3)^0}{(-3)^0} \\ & = (-3)^0 = 1 \end{aligned}$$

$$\begin{aligned} 8. \quad & \frac{6^5}{6^6} \\ & = 6^{-1} = \frac{1}{6} \end{aligned}$$

$$\begin{aligned} 9. \quad & \frac{2^{-5}}{2^0} \\ & = 2^{-5} = \frac{1}{2^5} \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{9^5}{9^5} \\ & = 9^0 = 1 \end{aligned}$$

Dividing Exponents (H)

Simplify each expression.

1. $\frac{(-7)^8}{(-7)^9}$

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

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

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

5. $\frac{(-4)^{-3}}{(-4)^4}$

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

7. $\frac{(-3)^3}{(-3)^8}$

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

9. $\frac{(-9)^7}{(-9)^7}$

10. $\frac{(-8)^6}{(-8)^6}$

Dividing Exponents (H) Answers

Simplify each expression.

$$1. \frac{(-7)^8}{(-7)^9}$$

$$= (-7)^{-1} = \frac{1}{-7}$$

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

$$= 9^0 = 1$$

$$3. \frac{8^4}{8^6}$$

$$= 8^{-2} = \frac{1}{8^2}$$

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

$$= 9^{-1} = \frac{1}{9}$$

$$5. \frac{(-4)^{-3}}{(-4)^4}$$

$$= (-4)^{-7} = \frac{1}{(-4)^7}$$

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

$$= 5^{-1} = \frac{1}{5}$$

$$7. \frac{(-3)^3}{(-3)^8}$$

$$= (-3)^{-5} = \frac{1}{(-3)^5}$$

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

$$= 2^{-13} = \frac{1}{2^{13}}$$

$$9. \frac{(-9)^7}{(-9)^7}$$

$$= (-9)^0 = 1$$

$$10. \frac{(-8)^6}{(-8)^6}$$

$$= (-8)^0 = 1$$

Dividing Exponents (I)

Simplify each expression.

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

2. $\frac{(-3)^{-2}}{(-3)^0}$

3. $\frac{(-7)^3}{(-7)^6}$

4. $\frac{3^2}{3^8}$

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

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

7. $\frac{(-6)^{-3}}{(-6)^{-3}}$

8. $\frac{(-6)^7}{(-6)^9}$

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

10. $\frac{(-8)^3}{(-8)^8}$

Dividing Exponents (I) Answers

Simplify each expression.

$$1. \frac{8^7}{8^7}$$
$$= 8^0 = 1$$

$$2. \frac{(-3)^{-2}}{(-3)^0}$$
$$= (-3)^{-2} = \frac{1}{(-3)^2}$$

$$3. \frac{(-7)^3}{(-7)^6}$$
$$= (-7)^{-3} = \frac{1}{(-7)^3}$$

$$4. \frac{3^2}{3^8}$$
$$= 3^{-6} = \frac{1}{3^6}$$

$$5. \frac{3^{-6}}{3^5}$$
$$= 3^{-11} = \frac{1}{3^{11}}$$

$$6. \frac{8^6}{8^6}$$
$$= 8^0 = 1$$

$$7. \frac{(-6)^{-3}}{(-6)^{-3}}$$
$$= (-6)^0 = 1$$

$$8. \frac{(-6)^7}{(-6)^9}$$
$$= (-6)^{-2} = \frac{1}{(-6)^2}$$

$$9. \frac{4^4}{4^7}$$
$$= 4^{-3} = \frac{1}{4^3}$$

$$10. \frac{(-8)^3}{(-8)^8}$$
$$= (-8)^{-5} = \frac{1}{(-8)^5}$$

Dividing Exponents (J)

Simplify each expression.

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

2. $\frac{(-2)^{-9}}{(-2)^{-1}}$

3. $\frac{(-4)^{-6}}{(-4)^4}$

4. $\frac{6^{-9}}{6^1}$

5. $\frac{(-7)^{-5}}{(-7)^0}$

6. $\frac{(-6)^6}{(-6)^6}$

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

8. $\frac{(-6)^{-7}}{(-6)^{-6}}$

9. $\frac{5^{-6}}{5^0}$

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

Dividing Exponents (J) Answers

Simplify each expression.

$$1. \frac{4^7}{4^9}$$

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

$$2. \frac{(-2)^{-9}}{(-2)^{-1}}$$

$$= (-2)^{-8} = \frac{1}{(-2)^8}$$

$$3. \frac{(-4)^{-6}}{(-4)^4}$$

$$= (-4)^{-10} = \frac{1}{(-4)^{10}}$$

$$4. \frac{6^{-9}}{6^1}$$

$$= 6^{-10} = \frac{1}{6^{10}}$$

$$5. \frac{(-7)^{-5}}{(-7)^0}$$

$$= (-7)^{-5} = \frac{1}{(-7)^5}$$

$$6. \frac{(-6)^6}{(-6)^6}$$

$$= (-6)^0 = 1$$

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

$$= 7^{-5} = \frac{1}{7^5}$$

$$8. \frac{(-6)^{-7}}{(-6)^{-6}}$$

$$= (-6)^{-1} = \frac{1}{-6}$$

$$9. \frac{5^{-6}}{5^0}$$

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

$$10. \frac{3^5}{3^8}$$

$$= 3^{-3} = \frac{1}{3^3}$$