

# Dividing Exponents (A)

Simplify each expression.

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

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

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

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

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

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

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

8.  $\frac{8^0}{8^{-6}}$

9.  $\frac{(-7)^4}{(-7)^{-9}}$

10.  $\frac{(-4)^1}{(-4)^0}$

# Dividing Exponents (A) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & \frac{(-2)^{-8}}{(-2)^{-8}} \\ & = (-2)^0 = 1 \end{aligned}$$

$$\begin{aligned} 2. \quad & \frac{8^6}{8^5} \\ & = 8 \end{aligned}$$

$$\begin{aligned} 3. \quad & \frac{4^{-5}}{4^{-6}} \\ & = 4 \end{aligned}$$

$$\begin{aligned} 4. \quad & \frac{2^4}{2^{-4}} \\ & = 2^8 \end{aligned}$$

$$\begin{aligned} 5. \quad & \frac{2^8}{2^{-1}} \\ & = 2^9 \end{aligned}$$

$$\begin{aligned} 6. \quad & \frac{5^9}{5^{-1}} \\ & = 5^{10} \end{aligned}$$

$$\begin{aligned} 7. \quad & \frac{7^{-4}}{7^{-5}} \\ & = 7 \end{aligned}$$

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

$$\begin{aligned} 9. \quad & \frac{(-7)^4}{(-7)^{-9}} \\ & = (-7)^{13} \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{(-4)^1}{(-4)^0} \\ & = (-4) \end{aligned}$$

## Dividing Exponents (B)

Simplify each expression.

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

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

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

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

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

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

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

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

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

10.  $\frac{(-6)^9}{(-6)^{-5}}$

## Dividing Exponents (B) Answers

Simplify each expression.

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

$$= 8^4$$

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

$$= 4^3$$

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

$$= 2^4$$

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

$$= 9^{13}$$

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

$$= (-9)^4$$

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

$$= 8^{12}$$

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

$$= 9^9$$

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

$$= 7^2$$

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

$$= (-3)^{10}$$

$$10. \frac{(-6)^9}{(-6)^{-5}}$$

$$= (-6)^{14}$$

## Dividing Exponents (C)

Simplify each expression.

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

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

3.  $\frac{5^1}{5^{-7}}$

4.  $\frac{(-5)^0}{(-5)^{-8}}$

5.  $\frac{(-4)^{-7}}{(-4)^{-8}}$

6.  $\frac{(-4)^8}{(-4)^{-2}}$

7.  $\frac{(-4)^8}{(-4)^{-7}}$

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

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

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

## Dividing Exponents (C) Answers

Simplify each expression.

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

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

$$\begin{aligned} 3. \quad & \frac{5^1}{5^{-7}} \\ & = 5^8 \end{aligned}$$

$$\begin{aligned} 4. \quad & \frac{(-5)^0}{(-5)^{-8}} \\ & = (-5)^8 \end{aligned}$$

$$\begin{aligned} 5. \quad & \frac{(-4)^{-7}}{(-4)^{-8}} \\ & = (-4) \end{aligned}$$

$$\begin{aligned} 6. \quad & \frac{(-4)^8}{(-4)^{-2}} \\ & = (-4)^{10} \end{aligned}$$

$$\begin{aligned} 7. \quad & \frac{(-4)^8}{(-4)^{-7}} \\ & = (-4)^{15} \end{aligned}$$

$$\begin{aligned} 8. \quad & \frac{8^{-6}}{8^{-8}} \\ & = 8^2 \end{aligned}$$

$$\begin{aligned} 9. \quad & \frac{(-8)^{-3}}{(-8)^{-3}} \\ & = (-8)^0 = 1 \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{(-9)^{-2}}{(-9)^{-4}} \\ & = (-9)^2 \end{aligned}$$

## Dividing Exponents (D)

Simplify each expression.

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

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

3.  $\frac{4^0}{4^0}$

4.  $\frac{(-3)^7}{(-3)^{-2}}$

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

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

7.  $\frac{(-5)^8}{(-5)^3}$

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

9.  $\frac{7^0}{7^{-1}}$

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

## Dividing Exponents (D) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & \frac{(-9)^{-1}}{(-9)^{-4}} \\ & = (-9)^3 \end{aligned}$$

$$\begin{aligned} 2. \quad & \frac{(-4)^{-3}}{(-4)^{-8}} \\ & = (-4)^5 \end{aligned}$$

$$\begin{aligned} 3. \quad & \frac{4^0}{4^0} \\ & = 4^0 = 1 \end{aligned}$$

$$\begin{aligned} 4. \quad & \frac{(-3)^7}{(-3)^{-2}} \\ & = (-3)^9 \end{aligned}$$

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

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

$$\begin{aligned} 7. \quad & \frac{(-5)^8}{(-5)^3} \\ & = (-5)^5 \end{aligned}$$

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

$$\begin{aligned} 9. \quad & \frac{7^0}{7^{-1}} \\ & = 7 \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{(-6)^{-6}}{(-6)^{-9}} \\ & = (-6)^3 \end{aligned}$$



# Dividing Exponents (E)

Simplify each expression.

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

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

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

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

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

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

7.  $\frac{2^0}{2^{-8}}$

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

9.  $\frac{5^0}{5^{-4}}$

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

## Dividing Exponents (E) Answers

Simplify each expression.

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

$$= 7^4$$

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

$$= 8^5$$

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

$$= 9^2$$

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

$$= 2^5$$

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

$$= (-3)$$

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

$$= (-8)^5$$

$$7. \frac{2^0}{2^{-8}}$$

$$= 2^8$$

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

$$= (-2)^0 = 1$$

$$9. \frac{5^0}{5^{-4}}$$

$$= 5^4$$

$$10. \frac{6^5}{6^5}$$

$$= 6^0 = 1$$

## Dividing Exponents (F)

Simplify each expression.

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

2.  $\frac{(-4)^8}{(-4)^2}$

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

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

5.  $\frac{(-7)^0}{(-7)^{-4}}$

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

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

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

9.  $\frac{(-7)^1}{(-7)^0}$

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

## Dividing Exponents (F) Answers

Simplify each expression.

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

$$\begin{aligned} 2. \quad & \frac{(-4)^8}{(-4)^2} \\ & = (-4)^6 \end{aligned}$$

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

$$\begin{aligned} 4. \quad & \frac{9^6}{9^{-7}} \\ & = 9^{13} \end{aligned}$$

$$\begin{aligned} 5. \quad & \frac{(-7)^0}{(-7)^{-4}} \\ & = (-7)^4 \end{aligned}$$

$$\begin{aligned} 6. \quad & \frac{(-4)^3}{(-4)^{-3}} \\ & = (-4)^6 \end{aligned}$$

$$\begin{aligned} 7. \quad & \frac{2^{-8}}{2^{-8}} \\ & = 2^0 = 1 \end{aligned}$$

$$\begin{aligned} 8. \quad & \frac{(-2)^4}{(-2)^{-4}} \\ & = (-2)^8 \end{aligned}$$

$$\begin{aligned} 9. \quad & \frac{(-7)^1}{(-7)^0} \\ & = (-7) \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{(-2)^6}{(-2)^5} \\ & = (-2) \end{aligned}$$

# Dividing Exponents (G)

Simplify each expression.

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

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

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

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

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

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

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

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

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

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

## Dividing Exponents (G) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & \frac{(-2)^{-8}}{(-2)^{-8}} \\ & = (-2)^0 = 1 \end{aligned}$$

$$\begin{aligned} 2. \quad & \frac{(-2)^8}{(-2)^1} \\ & = (-2)^7 \end{aligned}$$

$$\begin{aligned} 3. \quad & \frac{(-9)^{-2}}{(-9)^{-5}} \\ & = (-9)^3 \end{aligned}$$

$$\begin{aligned} 4. \quad & \frac{9^4}{9^1} \\ & = 9^3 \end{aligned}$$

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

$$\begin{aligned} 6. \quad & \frac{3^5}{3^5} \\ & = 3^0 = 1 \end{aligned}$$

$$\begin{aligned} 7. \quad & \frac{(-2)^{-3}}{(-2)^{-9}} \\ & = (-2)^6 \end{aligned}$$

$$\begin{aligned} 8. \quad & \frac{(-5)^{-1}}{(-5)^{-7}} \\ & = (-5)^6 \end{aligned}$$

$$\begin{aligned} 9. \quad & \frac{(-8)^{-2}}{(-8)^{-2}} \\ & = (-8)^0 = 1 \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{(-3)^{-5}}{(-3)^{-9}} \\ & = (-3)^4 \end{aligned}$$

# Dividing Exponents (H)

Simplify each expression.

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

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

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

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

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

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

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

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

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

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

## Dividing Exponents (H) Answers

Simplify each expression.

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

$$\begin{aligned} 2. \quad & \frac{(-8)^{-3}}{(-8)^{-8}} \\ & = (-8)^5 \end{aligned}$$

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

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

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

$$\begin{aligned} 6. \quad & \frac{7^{-4}}{7^{-7}} \\ & = 7^3 \end{aligned}$$

$$\begin{aligned} 7. \quad & \frac{9^8}{9^4} \\ & = 9^4 \end{aligned}$$

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

$$\begin{aligned} 9. \quad & \frac{(-8)^{-6}}{(-8)^{-6}} \\ & = (-8)^0 = 1 \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{6^5}{6^{-1}} \\ & = 6^6 \end{aligned}$$



# Dividing Exponents (I)

Simplify each expression.

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

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

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

4.  $\frac{(-3)^{-2}}{(-3)^{-7}}$

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

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

7.  $\frac{(-2)^1}{(-2)^{-4}}$

8.  $\frac{(-4)^8}{(-4)^0}$

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

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

# Dividing Exponents (I) Answers

Simplify each expression.

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

$$= 8^{13}$$

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

$$= (-7)$$

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

$$= (-2)$$

$$4. \frac{(-3)^{-2}}{(-3)^{-7}}$$

$$= (-3)^5$$

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

$$= 6$$

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

$$= 9^{12}$$

$$7. \frac{(-2)^1}{(-2)^{-4}}$$

$$= (-2)^5$$

$$8. \frac{(-4)^8}{(-4)^0}$$

$$= (-4)^8$$

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

$$= (-3)^0 = 1$$

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

$$= 8^0 = 1$$

## Dividing Exponents (J)

Simplify each expression.

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

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

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

4.  $\frac{(-5)^{-6}}{(-5)^{-7}}$

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

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

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

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

9.  $\frac{(-4)^4}{(-4)^0}$

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

## Dividing Exponents (J) Answers

Simplify each expression.

$$\begin{aligned} 1. \quad & \frac{(-3)^0}{(-3)^{-9}} \\ & = (-3)^9 \end{aligned}$$

$$\begin{aligned} 2. \quad & \frac{(-8)^{-1}}{(-8)^{-7}} \\ & = (-8)^6 \end{aligned}$$

$$\begin{aligned} 3. \quad & \frac{2^2}{2^{-4}} \\ & = 2^6 \end{aligned}$$

$$\begin{aligned} 4. \quad & \frac{(-5)^{-6}}{(-5)^{-7}} \\ & = (-5) \end{aligned}$$

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

$$\begin{aligned} 6. \quad & \frac{4^9}{4^8} \\ & = 4 \end{aligned}$$

$$\begin{aligned} 7. \quad & \frac{6^{-5}}{6^{-7}} \\ & = 6^2 \end{aligned}$$

$$\begin{aligned} 8. \quad & \frac{(-3)^3}{(-3)^1} \\ & = (-3)^2 \end{aligned}$$

$$\begin{aligned} 9. \quad & \frac{(-4)^4}{(-4)^0} \\ & = (-4)^4 \end{aligned}$$

$$\begin{aligned} 10. \quad & \frac{(-4)^4}{(-4)^{-7}} \\ & = (-4)^{11} \end{aligned}$$