

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.

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

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

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

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

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

$$= 5^0 = 1$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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