

Exponent Rules (J)

Simplify each expression.

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

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

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

4. $\frac{(-4)^0}{(-4)^6}$

5. $8^{-6} \cdot 8^{-7}$

6. $3^6 \cdot (-4)^6$

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

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

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

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

Exponent Rules (J) Answers

Simplify each expression.

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

$$= (-48)^{-6} = \frac{1}{(-48)^6}$$

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

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

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

$$= 6^{-42} = \frac{1}{6^{42}}$$

4. $\frac{(-4)^0}{(-4)^6}$

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

5. $8^{-6} \cdot 8^{-7}$

$$= 8^{-13} = \frac{1}{8^{13}}$$

6. $3^6 \cdot (-4)^6$

$$= (-12)^6$$

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

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

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

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

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

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

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

$$= 5^9$$