

Exponent Rules (A)

Simplify each expression.

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

2. $\frac{4^1}{4^0}$

3. $2^6 \cdot 2^{-9}$

4. $((-4)^9)^9$

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

6. $(-4)^7 \cdot (-8)^7$

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

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

9. $(-5)^{-4} \cdot 3^{-4}$

10. $(6^{-9})^1$

Exponent Rules (A) Answers

Simplify each expression.

$$1. \frac{7^6}{7^4}$$

$$= 7^2$$

$$2. \frac{4^1}{4^0}$$

$$= 4$$

$$3. 2^6 \cdot 2^{-9}$$

$$= 2^{-3} = \frac{1}{2^3}$$

$$4. ((-4)^9)^9$$

$$= (-4)^{81}$$

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

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

$$6. (-4)^7 \cdot (-8)^7$$

$$= 32^7$$

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

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

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

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

$$9. (-5)^{-4} \cdot 3^{-4}$$

$$= (-15)^{-4} = \frac{1}{(-15)^4}$$

$$10. (6^{-9})^1$$

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