

Multiplying Exponents (A)

Simplify each expression.

1. $4^{-2} \cdot 4^{-1}$

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

3. $2^{-1} \cdot 2^{-7}$

4. $(-5)^6 \cdot (-5)^{-2}$

5. $(-3)^5 \cdot (-3)^3$

6. $(-8)^{-1} \cdot (-8)^5$

7. $7^1 \cdot 7^8$

8. $7^0 \cdot 7^{-9}$

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

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

Multiplying Exponents (A) Answers

Simplify each expression.

1. $4^{-2} \cdot 4^{-1}$

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

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

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

3. $2^{-1} \cdot 2^{-7}$

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

4. $(-5)^6 \cdot (-5)^{-2}$

$$= (-5)^4$$

5. $(-3)^5 \cdot (-3)^3$

$$= (-3)^8$$

6. $(-8)^{-1} \cdot (-8)^5$

$$= (-8)^4$$

7. $7^1 \cdot 7^8$

$$= 7^9$$

8. $7^0 \cdot 7^{-9}$

$$= 7^{-9} = \frac{1}{7^9}$$

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

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

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

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

Multiplying Exponents (B)

Simplify each expression.

1. $3^9 \cdot 3^{-8}$

2. $(-2)^4 \cdot (-2)^2$

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

4. $2^{-7} \cdot 2^9$

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

6. $7^6 \cdot 7^8$

7. $5^{-4} \cdot 5^6$

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

9. $2^{-9} \cdot 2^{-8}$

10. $(-7)^2 \cdot (-7)^{-4}$

Multiplying Exponents (B) Answers

Simplify each expression.

1. $3^9 \cdot 3^{-8}$

$$= 3$$

2. $(-2)^4 \cdot (-2)^2$

$$= (-2)^6$$

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

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

4. $2^{-7} \cdot 2^9$

$$= 2^2$$

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

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

6. $7^6 \cdot 7^8$

$$= 7^{14}$$

7. $5^{-4} \cdot 5^6$

$$= 5^2$$

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

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

9. $2^{-9} \cdot 2^{-8}$

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

10. $(-7)^2 \cdot (-7)^{-4}$

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

Multiplying Exponents (C)

Simplify each expression.

1. $(-6)^9 \cdot (-6)^9$

2. $4^1 \cdot 4^9$

3. $2^8 \cdot 2^2$

4. $6^3 \cdot 6^4$

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

6. $3^2 \cdot 3^3$

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

8. $9^{-5} \cdot 9^8$

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

10. $9^2 \cdot 9^9$

Multiplying Exponents (C) Answers

Simplify each expression.

1. $(-6)^9 \cdot (-6)^9$

$$= (-6)^{18}$$

2. $4^1 \cdot 4^9$

$$= 4^{10}$$

3. $2^8 \cdot 2^2$

$$= 2^{10}$$

4. $6^3 \cdot 6^4$

$$= 6^7$$

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

$$= (-9)^7$$

6. $3^2 \cdot 3^3$

$$= 3^5$$

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

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

8. $9^{-5} \cdot 9^8$

$$= 9^3$$

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

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

10. $9^2 \cdot 9^9$

$$= 9^{11}$$

Multiplying Exponents (D)

Simplify each expression.

1. $8^9 \cdot 8^1$

2. $8^{-7} \cdot 8^3$

3. $8^1 \cdot 8^{-8}$

4. $7^{-1} \cdot 7^{-6}$

5. $(-3)^{-1} \cdot (-3)^{-6}$

6. $4^9 \cdot 4^9$

7. $3^{-5} \cdot 3^{-3}$

8. $7^{-8} \cdot 7^0$

9. $9^{-7} \cdot 9^{-4}$

10. $4^0 \cdot 4^{-2}$

Multiplying Exponents (D) Answers

Simplify each expression.

1. $8^9 \cdot 8^1$

$$= 8^{10}$$

2. $8^{-7} \cdot 8^3$

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

3. $8^1 \cdot 8^{-8}$

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

4. $7^{-1} \cdot 7^{-6}$

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

5. $(-3)^{-1} \cdot (-3)^{-6}$

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

6. $4^9 \cdot 4^9$

$$= 4^{18}$$

7. $3^{-5} \cdot 3^{-3}$

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

8. $7^{-8} \cdot 7^0$

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

9. $9^{-7} \cdot 9^{-4}$

$$= 9^{-11} = \frac{1}{9^{11}}$$

10. $4^0 \cdot 4^{-2}$

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

Multiplying Exponents (E)

Simplify each expression.

1. $5^2 \cdot 5^0$

2. $8^{-4} \cdot 8^5$

3. $7^{-3} \cdot 7^2$

4. $(-9)^8 \cdot (-9)^0$

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

6. $3^{-7} \cdot 3^1$

7. $6^{-6} \cdot 6^{-2}$

8. $(-5)^0 \cdot (-5)^3$

9. $3^6 \cdot 3^9$

10. $8^{-2} \cdot 8^6$

Multiplying Exponents (E) Answers

Simplify each expression.

1. $5^2 \cdot 5^0$

$$= 5^2$$

2. $8^{-4} \cdot 8^5$

$$= 8$$

3. $7^{-3} \cdot 7^2$

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

4. $(-9)^8 \cdot (-9)^0$

$$= (-9)^8$$

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

$$= (-2)^6$$

6. $3^{-7} \cdot 3^1$

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

7. $6^{-6} \cdot 6^{-2}$

$$= 6^{-8} = \frac{1}{6^8}$$

8. $(-5)^0 \cdot (-5)^3$

$$= (-5)^3$$

9. $3^6 \cdot 3^9$

$$= 3^{15}$$

10. $8^{-2} \cdot 8^6$

$$= 8^4$$

Multiplying Exponents (F)

Simplify each expression.

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

2. $6^7 \cdot 6^{-5}$

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

4. $7^{-1} \cdot 7^{-6}$

5. $(-8)^6 \cdot (-8)^{-1}$

6. $(-5)^{-4} \cdot (-5)^0$

7. $8^{-5} \cdot 8^1$

8. $8^3 \cdot 8^5$

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

10. $(-4)^{-3} \cdot (-4)^0$

Multiplying Exponents (F) Answers

Simplify each expression.

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

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

2. $6^7 \cdot 6^{-5}$

$$= 6^2$$

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

$$= 3^6$$

4. $7^{-1} \cdot 7^{-6}$

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

5. $(-8)^6 \cdot (-8)^{-1}$

$$= (-8)^5$$

6. $(-5)^{-4} \cdot (-5)^0$

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

7. $8^{-5} \cdot 8^1$

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

8. $8^3 \cdot 8^5$

$$= 8^8$$

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

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

10. $(-4)^{-3} \cdot (-4)^0$

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

Multiplying Exponents (G)

Simplify each expression.

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

2. $(-7)^{-9} \cdot (-7)^4$

3. $5^5 \cdot 5^2$

4. $2^6 \cdot 2^{-8}$

5. $5^{-7} \cdot 5^{-3}$

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

7. $2^5 \cdot 2^9$

8. $2^1 \cdot 2^7$

9. $5^5 \cdot 5^{-1}$

10. $(-5)^{-1} \cdot (-5)^1$

Multiplying Exponents (G) Answers

Simplify each expression.

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

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

2. $(-7)^{-9} \cdot (-7)^4$

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

3. $5^5 \cdot 5^2$

$$= 5^7$$

4. $2^6 \cdot 2^{-8}$

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

5. $5^{-7} \cdot 5^{-3}$

$$= 5^{-10} = \frac{1}{5^{10}}$$

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

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

7. $2^5 \cdot 2^9$

$$= 2^{14}$$

8. $2^1 \cdot 2^7$

$$= 2^8$$

9. $5^5 \cdot 5^{-1}$

$$= 5^4$$

10. $(-5)^{-1} \cdot (-5)^1$

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

Multiplying Exponents (H)

Simplify each expression.

1. $(-2)^{-9} \cdot (-2)^{-3}$

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

3. $9^0 \cdot 9^5$

4. $3^{-4} \cdot 3^4$

5. $4^{-7} \cdot 4^2$

6. $(-3)^{-9} \cdot (-3)^5$

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

8. $(-4)^7 \cdot (-4)^{-2}$

9. $3^{-8} \cdot 3^{-2}$

10. $(-8)^{-1} \cdot (-8)^{-9}$

Multiplying Exponents (H) Answers

Simplify each expression.

1. $(-2)^{-9} \cdot (-2)^{-3}$

$$= (-2)^{-12} = \frac{1}{(-2)^{12}}$$

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

$$= 3$$

3. $9^0 \cdot 9^5$

$$= 9^5$$

4. $3^{-4} \cdot 3^4$

$$= 3^0 = 1$$

5. $4^{-7} \cdot 4^2$

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

6. $(-3)^{-9} \cdot (-3)^5$

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

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

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

8. $(-4)^7 \cdot (-4)^{-2}$

$$= (-4)^5$$

9. $3^{-8} \cdot 3^{-2}$

$$= 3^{-10} = \frac{1}{3^{10}}$$

10. $(-8)^{-1} \cdot (-8)^{-9}$

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

Multiplying Exponents (I)

Simplify each expression.

1. $3^9 \cdot 3^5$

2. $4^{-6} \cdot 4^0$

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

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

5. $4^2 \cdot 4^7$

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

7. $(-3)^{-4} \cdot (-3)^{-5}$

8. $3^8 \cdot 3^8$

9. $8^0 \cdot 8^{-7}$

10. $6^9 \cdot 6^1$

Multiplying Exponents (I) Answers

Simplify each expression.

1. $3^9 \cdot 3^5$

$$= 3^{14}$$

2. $4^{-6} \cdot 4^0$

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

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

$$= (-9)^2$$

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

$$= (-4)^{15}$$

5. $4^2 \cdot 4^7$

$$= 4^9$$

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

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

7. $(-3)^{-4} \cdot (-3)^{-5}$

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

8. $3^8 \cdot 3^8$

$$= 3^{16}$$

9. $8^0 \cdot 8^{-7}$

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

10. $6^9 \cdot 6^1$

$$= 6^{10}$$

Multiplying Exponents (J)

Simplify each expression.

1. $(-5)^{-3} \cdot (-5)^{-8}$

2. $9^{-9} \cdot 9^1$

3. $2^5 \cdot 2^{-7}$

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

5. $3^7 \cdot 3^2$

6. $(-4)^1 \cdot (-4)^8$

7. $(-7)^3 \cdot (-7)^{-3}$

8. $(-2)^{-4} \cdot (-2)^0$

9. $(-9)^6 \cdot (-9)^{-6}$

10. $(-5)^{-4} \cdot (-5)^4$

Multiplying Exponents (J) Answers

Simplify each expression.

1. $(-5)^{-3} \cdot (-5)^{-8}$

$$= (-5)^{-11} = \frac{1}{(-5)^{11}}$$

2. $9^{-9} \cdot 9^1$

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

3. $2^5 \cdot 2^{-7}$

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

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

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

5. $3^7 \cdot 3^2$

$$= 3^9$$

6. $(-4)^1 \cdot (-4)^8$

$$= (-4)^9$$

7. $(-7)^3 \cdot (-7)^{-3}$

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

8. $(-2)^{-4} \cdot (-2)^0$

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

9. $(-9)^6 \cdot (-9)^{-6}$

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

10. $(-5)^{-4} \cdot (-5)^4$

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