Answer Key · Lesson 7.2: Zero and Negative Exponents

School Launch · Algebra I · Unit 7 · Worksheet A · for the parent

Key

1. $\frac{1}{16}$

Simplify; write with positive exponents only: 4^{-2}.

2. $\frac{1}{8}$

Simplify; write with positive exponents only: 2^{-3}.

3. $\frac{1}{5}$

Simplify; write with positive exponents only: 5^{-1}.

4. $\frac{4y}{x^{3}}$

1. $x^{-3} = \frac{1}{x^{3}}$
2. $y^{-1} = \frac{1}{y^{1}}$
3. Result: $\frac{4y}{x^{3}}$

Simplify; write with positive exponents only: $\frac{4x^{-3}}{y^{-1}}$.

5. $\frac{5y}{x^{6}}$

1. $x^{-6} = \frac{1}{x^{6}}$
2. $y^{-1} = \frac{1}{y^{1}}$
3. Result: $\frac{5y}{x^{6}}$

Simplify; write with positive exponents only: $\frac{5x^{-6}}{y^{-1}}$.

6. $\frac{5y^{5}}{x^{2}}$

1. $x^{-2} = \frac{1}{x^{2}}$
2. $y^{-5} = \frac{1}{y^{5}}$
3. Result: $\frac{5y^{5}}{x^{2}}$

Simplify; write with positive exponents only: $\frac{5x^{-2}}{y^{-5}}$.

7. $\frac{5y^{4}}{x^{2}}$

1. $x^{-2} = \frac{1}{x^{2}}$
2. $y^{-4} = \frac{1}{y^{4}}$
3. Result: $\frac{5y^{4}}{x^{2}}$

Simplify; write with positive exponents only: $\frac{5x^{-2}}{y^{-4}}$.

8. $\frac{1}{25y^{3}}$

1. $x^{-2} = \frac{1}{x^{2}}$
2. $y^{-1} = \frac{1}{y^{1}}$
3. Result: $\frac{1}{25y^{3}}$

Simplify; write with positive exponents only: $\frac{(5x^{-2}y^{2})^{-2}}{x^{4}y^{-1}}$.

9. $\frac{1}{16xy}$

1. $x^{-2} = \frac{1}{x^{2}}$
2. $y^{-1} = \frac{1}{y^{1}}$
3. Result: $\frac{1}{16xy}$

Simplify; write with positive exponents only: $\frac{(4x^{-2}y^{1})^{-2}}{x^{5}y^{-1}}$.

10. $\frac{1}{4y^{3}}$

1. $x^{-2} = \frac{1}{x^{2}}$
2. $y^{-1} = \frac{1}{y^{1}}$
3. Result: $\frac{1}{4y^{3}}$

Simplify; write with positive exponents only: $\frac{(2x^{-2}y^{2})^{-2}}{x^{4}y^{-1}}$.