

Name: _____

Date: _____ Score: _____

Simplifying Expressions with Negative Exponents

Simplify. Your answer should contain only positive exponents

1 $2m^{-1}n^{-3} \cdot (2m^{-1}n^{-3})^4$

2 $\frac{2x^{-3}}{(x^4y^{-3})^{-1}}$

3 $\frac{4x^{-5}y^{-3} \cdot 3x^3y^{-2}}{6x^{-5}y^3}$

4 $\frac{a^8b^{-5}}{a^2b^3}$

5 $\left(\frac{4x}{12x^2y}\right)^{-2}$

6 $\left(\frac{y}{x^2}\right)^{-5}$

7 $\frac{w(xy)^{-2}}{(3tv)^{-2}}$

8 $\frac{(xy)^{-1}}{ab^{-2}}$

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Simplifying Expressions with Negative Exponents

Answers

1 $2m^{-1}n^{-3} \cdot (2m^{-1}n^{-3})^4$

$$\frac{32}{m^5n^{15}}$$

2 $\frac{2x^{-3}}{(x^4y^{-3})^{-1}}$

$$\frac{2x}{y^3}$$

3 $\frac{4x^{-5}y^{-3} \cdot 3x^3y^{-2}}{6x^{-5}y^3}$

$$\frac{2x^3}{y^8}$$

4 $\frac{a^8b^{-5}}{a^2b^3}$

$$\frac{a^6}{b^8}$$

5 $\left(\frac{4x}{12x^2y}\right)^{-2}$

$$9x^2y^2$$

6 $\left(\frac{y}{x^2}\right)^{-5}$

$$\frac{x^{10}}{y^5}$$

7 $\frac{w(xy)^{-2}}{(3tv)^{-2}}$

$$\frac{9t^2v^2}{x^2y^2}$$

8 $\frac{(xy)^{-1}}{ab^{-2}}$

$$\frac{b^2}{xya}$$