

Name: _____

Date: _____

Learning Goal 4.4

Use exponent laws to simplify expressions with rational exponents.

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

2. $\frac{6x^4y^{-3}}{14xy^2}$

3. $(25a^4b^2)^{3/2}$

4. $(x^3y^{-3/2})(x^{-1}y^{1/2})$

5. $\frac{12x^{-5}y^{5/2}}{3x^{1/2}y^{-1/2}}$

6. $\left(\frac{50x^2y^4}{2x^4y^7}\right)^{1/2}$

7. $\left(\frac{-5m^4n^{-5}}{15n^2p^6}\right)^{-4}$

8. $\left(\frac{-4m^3n^{-6}}{12n^3p^4}\right)^{-3}$

9. $-\left(\frac{12a^4b^{-6}}{27a^{-2}c^6}\right)^{-1/2}$

10. $\left(\frac{-12a^6b^{-6}}{20a^{-3}c^4}\right)^{-4/3}$