

**Math 151 Sec F0501/F0502**  
**Extra Algebra Review Problems**

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1. Simplify using only positive exponents:  $\frac{x^{-3}y^{-2}}{x^2y^{-7}}$ .

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

2. Simplify using only positive exponents:  $\frac{(2x^2y^{-5})^2}{x^2}$ .

$$\frac{4x^2}{y^8}$$

3. Simplify using only positive exponents:  $\frac{x}{(x^{1/4}y^{1/5})^8}$ .

$$\frac{1}{8x^2y^8}$$

4. Simplify using only positive exponents:  $\frac{x^{-4}x^{-3}}{y^{-7}y^6}$ .

$$\frac{x^{-7}}{y}$$

5. Simplify using only positive exponents:  $\frac{3ab^{-2}}{a^{-2}b^3}$ .

$$\frac{3a^3}{b^5}$$

6. Simplify using only positive exponents:  $\left(\frac{x^{-3}}{y^2w^{-3}}\right)^{-1}$

$$\frac{y^2wx^3}{1}$$

7. Simplify:  $(16x^{-4})^{5/4}$

$$x^{-5}$$

8. Simplify:  $\sqrt{64^{10/6}}$

$$32$$

9. Simplify:  $\frac{8x^3y^2 - 4x^2y - 2xy}{2xy}$

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

10. Simplify:  $\frac{z^2 - 2z}{z^2 + 2z} \cdot \frac{z^2}{z - 2}$

$$\frac{z + z}{z}$$


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