Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Use the **Gauss-Jordan method** to solve the system $\left\{ \begin{array}{ccccc} 2x & + & 4y & = & 18 \\ 7x & - & 10y & = & 15 \end{array} \right\}$

2. Simplify the following expressions and write your answers without negative exponents:

(a) $\dfrac{10x^5y^2 \cdot y^{-3}}{2x^{-3}y^{-1}}$

(b) $\dfrac{(-2x^{-5}y)(-3xy^8)}{-6x^{-6}y^3}$

3. Simplify the following expressions and write your answers without negative exponents:

(a) $(-2x^{-2}y^7)^{-3}$

(b) $(7xz^2)\left(\dfrac{7xy^{-1}}{z}\right)^{-3}$