EXAM 2 - MATH 102

YOUR NAME:_____

Read each problem **very carefully** before starting to solve it. Each problem is worth 10 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. George bought a Math text, a Physics text and a Chemistry text for a total of $276. The Math text was $20 more than the Physics text and the Chemistry text was twice the price of the Physics text. How much did each textbook cost?

2. Use the Gauss-Jordan (matrix) method to solve $\left\{ \begin{array}{rrrrr} 2x & + & 6y & = & 15 \\ 3x & + & 10y & = & 24 \end{array} \right\}$

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

(a) $\dfrac{(-5x^{-3}y^4)(-7xy^3)}{-35x^5y^{-9}}$

(b) $(3x^2z^{-1})\left(\dfrac{3xy^{-3}}{z^5}\right)^{-3}$

4. (a) Multiply $(2x-3)^3$

(b) Factor **completely** $ab^2 + 3b^2 - 9a - 27$

5. Factor **completely** the polynomials

(a) $6x^2 + 23x + 20$

(b) $7x^2 - 18x + x^3$