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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. Solve the following system using the matrix method:

$$\left\{ \begin{array}{rcr} 3x - y + z & = & 12 \\ x + y + z & = & 0 \\ x + 2z & = & -3 \end{array} \right\}.$$

2. Simplify and write your answer without negative exponents:

   (a) $\dfrac{3y^{-4}y^{-6}}{2^{-3}y^2y^{-7}} =$

   (b) $\dfrac{(3x^{-1}y^3)^{-2}}{(2xy^{-1})^3} =$

3. Sugar went to the convenience store and bought 2 chocolates and 5 ice cream cones. When her cravings reappeared, she went back and bought 7 chocolates and 8 ice cream cones. The total amount she spent on both trips was $57 and her second trip cost twice as much as her first. How much did each chocolate and each ice cream cone cost at the store?