NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID. \_\_\_\_\_\_\_\_\_\_\_\_ GROUP \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Find the inverse, if it exists, by using Gauss-Jordan Method. **(6 points)**
2. How does matrix multiplication interact with scalar multiplication: **(2 points)**
   1. Is r(GH) = (rG)H ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Is G(rH) = r(GH) ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. How does matrix multiplication interact with linear combination: **(2 points)**
   1. Is F(rG + sH) = r(FG) + s(FH) ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Is (rF + sG)H = rFH + sGH ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_