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| Assessment 2Dusty Wilson Math 220 No work = no credit **Non CAS Calculators allowed** | **Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *If others would but reflect on mathematical truths as deeply and continuously as I have, they would make my discoveries.* Johann Carl Friedrich Gauss 1777 - 1855 (German mathematician) |

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| Warm-ups (1 pt each): | =\_\_\_\_\_ | =\_\_\_\_\_ |  |

(1 pt) According to Gauss (above), what is the secret to making great mathematical discoveries? Answer using complete English sentences.

(4 pts) Write the general solution of the linear system whose augmented matrix is reduced to:



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| (4 pts) Write the system of equations as a vector equation (an equation that includes a linear combination of vectors). | (4 pts) Express  as a linear combination of  and |

(2 pts) For what value(s) of *h* is  in the span of  and ?

(4 pts) Complete the following proof.

Claim: If  and  are scalars, then .

Proof.

Let  and scalars  be given.