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| Assessment 3Dusty Wilson Math 163 No work = no credit | **Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *He is like the fox, who effaces his tracks*  *in the sand with his tail.* Niels Henrik Abel 1802 - 1829 (Norwegian mathematician) |

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

(1 pt) In the quote above, Abel talks about Gauss’ writing style. According to Abel, how easy was it to understand Gauss’ work? Answer using complete English sentences.

(5 pts) If  and  find 

(5 pts) Answer the following:

1. Find a nonzero vector orthogonal to the plane through the points , , and .
2. Find the area of the triangle *PQR*

(5 pts) Find the symmetric AND vector equation(s) for the line of intersection of the planes  and .

(5 pts) Find the equation of the plane that passes through  and contains the line .