Kentucky FFA Agronomy CDE
Rotation E: Fertilizer Problem

The following soil test and fertilizer cost sheet was provided by Southern States

Fertilizer & Cost on hand at Southern States

18-46-0 = $435/ton
0-0-60 = $325/ton
46-0-0 = $345/ton
Pellet Lime = $180/ton

1) Show all work for questions two through seven – chart is optional and only for your benefit. When calculating, utilize two decimals beyond the whole number. (20 points)

<table>
<thead>
<tr>
<th>Fertilizer Rations</th>
<th>Element lbs./ton</th>
<th>$/ton</th>
<th>$/lb</th>
<th>Lbs. of fertilizer/acre</th>
<th>Cost/acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-46-0</td>
<td>920 – P</td>
<td>435</td>
<td>0.22</td>
<td>565.22</td>
<td>124.35</td>
</tr>
<tr>
<td></td>
<td>360 – N</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46-0-0</td>
<td>920 – N</td>
<td>345</td>
<td>0.17</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0-0-60</td>
<td>1200 - K</td>
<td>325</td>
<td>0.16</td>
<td>191.67</td>
<td>30.67</td>
</tr>
</tbody>
</table>

Phosphorus 920/2000 = 260/x; 920x = 520,000
x = 565.22

565.22 * .18 (% Nitrogen present) = 101.74
20 (Nitrogen needed for field) – 101.74 = -81.74

Potassium 1200/2000 = 115/x
1200x = 230,000
x = 191.67

2) How much total nitrogen was spread on the field? **8851.38 lbs** (5 points)

3) If you could only afford half the cost of the required lime needed, how much would it cost for the entire field? $7,830 (5 points)

4) What does DAP stand for? **Di-Ammonium Phosphate** (5 points)

5) How many tons of Ammonia Nitrate was used on this field? **0 was used on the field** (5 points)

6) How many total pounds per acre would be spread on the field (excluding lime and micronutrients)? **65,849.43 lbs.** (5 points)

7) What is the total fertilizer cost for the field (excluding lime and micronutrients)? **$13,486.74** (5 points)