Proving Units Open Quiz 1

Show all work for full credit: 0.5 points for units, 0.5 points for unit cancelling, 0.5 points written as fraction/answer with label, 0.5 points for correct answer. Use the following chart for to answer questions 1-4.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Days to head (Jday)</th>
<th>Flag leaf disease (%)</th>
<th>Grain yield (bu/A)</th>
<th>Test weight (lb/bu)</th>
<th>Seed count (seeds/lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faller</td>
<td>178</td>
<td>6</td>
<td>71.0</td>
<td>56.8</td>
<td>14366</td>
</tr>
<tr>
<td>Glenn</td>
<td>178</td>
<td>6</td>
<td>67.7</td>
<td>61.8</td>
<td>14873</td>
</tr>
<tr>
<td>Barlow</td>
<td>177</td>
<td>10</td>
<td>60.9</td>
<td>57.8</td>
<td>15820</td>
</tr>
<tr>
<td>Brennan</td>
<td>177</td>
<td>25</td>
<td>55.4</td>
<td>57.5</td>
<td>16984</td>
</tr>
<tr>
<td>Velva</td>
<td>180</td>
<td>12</td>
<td>41.1</td>
<td>47.7</td>
<td>17208</td>
</tr>
<tr>
<td>Elgin</td>
<td>179</td>
<td>7</td>
<td>62.7</td>
<td>55.7</td>
<td>16209</td>
</tr>
<tr>
<td>Jenna</td>
<td>180</td>
<td>7</td>
<td>59.2</td>
<td>55.9</td>
<td>14434</td>
</tr>
<tr>
<td>Select</td>
<td>178</td>
<td>10</td>
<td>71.7</td>
<td>60.5</td>
<td>14926</td>
</tr>
<tr>
<td>WB Mayville</td>
<td>178</td>
<td>8</td>
<td>53.1</td>
<td>55.1</td>
<td>14607</td>
</tr>
<tr>
<td>Prosper</td>
<td>179</td>
<td>5</td>
<td>60.4</td>
<td>56.0</td>
<td>14391</td>
</tr>
<tr>
<td>Rollag</td>
<td>179</td>
<td>8</td>
<td>51.9</td>
<td>58.7</td>
<td>15582</td>
</tr>
<tr>
<td>SY Soren</td>
<td>177</td>
<td>10</td>
<td>64.0</td>
<td>57.2</td>
<td>17514</td>
</tr>
</tbody>
</table>

1. If Jim Halpert farms 2000 acres of wheat and had the bushel/acre average for Faller wheat above, how much total wheat did he harvest in bushels?

\[
\frac{2000 \text{ acres}}{1 \text{ acre}} \times \frac{71.6 \text{ bu}}{1 \text{ bu}} = \frac{6 \text{ bushels}}{1} \times 142000 = 142000 \text{ bushels}
\]

2. How many total tons did Jim harvest given that 1 ton = 2000 pounds and his test weight for the Faller wheat was 60 pounds per bushel.

\[
\frac{142000 \text{ bu}}{1} \times \frac{56.8 \text{ lbs}}{1 \text{ bu}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} = \frac{4032.8 \text{ tons}}{1}
\]
3. Kevin Malone raise SY Soren wheat. His agronomist tells him he needs to plant 68.5 pounds of wheat per acre. How many total seeds is he planting per acre?

\[
\frac{17514 \text{ seeds}}{16} \times \frac{68.5 \text{ lbs}}{\text{acre}} = \frac{\text{seeds}}{\text{acre}}
\]

\[
1,199,709 \text{ seeds}
\]

\[
\text{acre}
\]

4. Kevin reads that he needs to plant 1.5 million (1,500,000) seeds per acre. Is his agronomist consistent with this number? If not how many pounds should he plant per acre?

\[
\frac{116}{7514} \times \frac{1,500,000 \text{ seeds}}{1 \text{ acre}} = \frac{.65}{\text{acre}}
\]

\[
\text{No}
\]

\[
85.65 \text{ lbs}
\]

\[
\text{acre}
\]

5. Write 0.00034 as a percent. 1 pt

\[
.034 \%
\]

6. Solve and reduce: \(\frac{x}{y} \div \frac{y}{y}\) 1 pt

\[
\frac{x}{y} \div \frac{y}{y} = \frac{x}{y}
\]