1. What is wrong with the following figures:
   a. 
   ![Graph showing a trend line with values from 1980 to 2000.]
   b. 
   ![Three bottles with labels 1996, 1997, 1998 and text: USA consumption of wine has doubled in two years.]

2. What type of data are represented by the following:
   a. Temperature of the water in a river?
   b. Velocity of flow in the river channel?
   c. Type of car in a survey on commuting habits?
   d. Satisfaction rating (very good, good, indifferent, bad, very bad) in a survey of attitudes towards rail travel since privatization?

3. What is the quadratic mean diameter of the following set of tree diameter measures?
   10.2, 12.6, 16.9, 18.5, 14.2, 15.0

4. Calculate to the nearest 1/10th foot the radius of a 5th, 10th, and 100th acre circular plot.

5. Calculate to the nearest 1/10th meter the radius of a 7th, 12th, and 30th hectare circular plot.
6. Calculate to the nearest 1/10th foot the length of the side of a 5th, 10th, and 100th acre square plot.

7. Calculate to the nearest 1/10th meter the length of the side of a 7th, 12th, and 30th hectare square plot.

8. Consider the following data

<table>
<thead>
<tr>
<th>Tree #</th>
<th>DBH (in)</th>
<th>Tree #</th>
<th>DBH (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13.3</td>
<td>11</td>
<td>24.1</td>
</tr>
<tr>
<td>2</td>
<td>14</td>
<td>12</td>
<td>8</td>
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<td>3</td>
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<td>13</td>
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<td>4</td>
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<td>17</td>
<td>19</td>
<td>13.2</td>
</tr>
<tr>
<td>10</td>
<td>22.3</td>
<td>20</td>
<td>16</td>
</tr>
</tbody>
</table>

a. Estimate the mean DBH.
b. Estimate the standard error of the mean.
c. Compute the 95% confidence limit of the mean
d. Is the distribution skewed? If so, is it positive or negative?

9. Assuming that each of your paces is 3 ½ feet, calculate the following horizontal distances to the nearest foot:
   a. A flat distance between A and B of 32 paces?

b. A flat distance between A and B of 27 paces?

c. The horizontal distance between A and B when the distance on a slope of 30° is 11 paces?

d. The horizontal distance between A and B when the distance on a slope of 60° is 39 paces?