ER Diagrams

1. Consider the following ER diagram:

Which of these cardinalities is possible?

<table>
<thead>
<tr>
<th>person</th>
<th>member</th>
<th>club</th>
<th>Is it possible?</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0</td>
<td>8</td>
<td>Yes No</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
<td>8</td>
<td>Yes No</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>5</td>
<td>Yes No</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>5</td>
<td>Yes No</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>4</td>
<td>Yes No</td>
</tr>
<tr>
<td>11</td>
<td>9</td>
<td>4</td>
<td>Yes No</td>
</tr>
</tbody>
</table>
2. Below is an Entity-Relationship diagram about car dealerships. It may or may not represent the domain well. Answer the questions below.

![Entity-Relationship Diagram]

(a) A car sale cannot involve more than one salesperson.
   True      False
(b) There can be two cars with the same VIN as long as the model and year are different.
   True      False
(c) A salesperson can work at any number of dealerships.
   True      False
(d) There can’t be more salespeople than dealerships.
   True      False
(e) There can be multiple sales on the same date.
   True      False
(f) Two salespeople can have the same sID as long as they work at different dealerships.
   True      False
(g) This model contains a weak entity set.
   True      False
(h) The works at relationship is a one-to-many relationship.
   True      False