**Worksheet Exercise 4.4.A.**

**Practicing the Rules**

Name ___________________________  
Class ___________________________  
Date ________________

**Part A.** For each of the following inferences, determine whether the conclusion may be derived by the rule listed. Answer YES or NO in the blanks provided. (Premiss "Ma" is listed only to make the name "a" already present in the deduction.)

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>( \forall x (Fx \lor Gx) )</td>
<td>( \forall x (Fx \lor Gx) )</td>
<td>( \forall x (Fx \lor Gx) )</td>
</tr>
<tr>
<td></td>
<td>( \therefore Fb \lor Gb )</td>
<td>( \therefore Fb \lor Gb )</td>
<td>( \therefore Fb \lor Gb )</td>
</tr>
</tbody>
</table>

| 5. | \( \forall x (Fx \lor Gx) \) | \( \forall x (Fx \lor Gx) \) | \( \forall x (Fx \lor Gx) \) | \( \forall x (Fx \lor Gx) \) |
|   | \( \therefore Fb \lor Gb \) | \( \therefore Fa \lor Ga \) | \( \therefore Fa \lor Gb \) | \( \therefore \sim Fb \) |
| E.G. _____ | E.G. _____ | E.G. _____ | E.G. _____ |

| 9. | \( \exists x Fx \) | \( \exists x Fx \) | \( \exists x Fx \) | \( \exists x Fx \) |
|   | \( \therefore Fb \) | \( \therefore \) select name a | \( \therefore \) select name b | \( \therefore \) select name b |
| E.I. _____ | E.I. _____ | E.I. _____ | E.I. _____ |

| 13. | \( \sim (\exists x Fx) \) | \( \sim (\forall x Fx) \) | \( \exists x \sim Fx \) | \( \exists x \sim Fx \) |
|   | \( \therefore (\forall x) \sim Fx \) | \( \therefore (\forall x) \sim Fx \) | \( \therefore \sim (\forall x) Fx \) | \( \therefore (\forall x) \sim Fx \) |
| Q.N. _____ | Q.N. _____ | Q.N. _____ | Q.N. _____ |

| 17. | \( \forall x Fx \) | \( \forall x Fx \) | \( \forall x Fx \) | \( \forall x Fx \) |
|   | \( \left[\right. \) select name a | \( \left[\right. \) select name b | \( \left[\right. \) select name b | \( \left[\right. \) select name b |