One of the facts that the knowledge base inferred at level 3 was “Mary is attacked by Sarah”.

The initial facts from the knowledge base required for this eventual inference can be split into five groups. First is the Pokemon type of each character involved, so Sian is a Bulbasaur, Mary is a Butterfree and Sarah is an Eevee. Second is that Butterfree is stronger than Bulbasaur and Eevee is stronger than Butterfree. The final three groups only have one necessary fact in each, Mary attacks Sian, Sarah is Sian’s parent and Sian is 3 years old.

From these facts, after one level of inference, the following facts are also available. First is that we get the Pokemon type for all Pokemon involved from the logic rules, so Sian is grass, Mary is flying and Sarah is normal. From a taxonomy rule we find that Sian is a child of Sarah, and from a semantic rule we have that Sian is attacked by Mary. We also have that Sarah wants to defend Sian, as Sian is under the age of 8 and a child of Sarah. Finally, we have that Sarah is stronger than Mary and Mary is stronger than Sian from the strength rules.

Another layer of inference can now be considered, from one of the semantic rules we have that Sian is vulnerable to Mary. By this and the initial fact that Sarah is Sian’s parent, via the angry rule, we get that Sarah is angry at Mary. Another angry rule with this and the fact that Sarah is stronger than Mary, from the first inference level, gives us that Sarah wants to attack Mary. Finally, as Sarah wants to defend Sian, Mary attacks Sian and Sarah wants to attack Mary, it follows by one of the defend rules that Sarah attacks Mary.

At the final layer of inference, a single use of one of the semantic rules and the fact from the previous inference level that Sarah attacks Mary, we have that Mary is attacked by Sarah.