**Logic Tool Results**

Logical Expression: p→q⊢(p∧q→p)∧(p→p∧q)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Line | Expression | Rule | First Segment | Second Segment | Third Segment |
| ┌--------------------------------------------------------------------------------------------------------------┐ | | | | | |
| 1 | p | Assumption |  |  |  |
| 2 | p→q | Data |  |  |  |
| 3 | q | MP | 1 | 2 |  |
| 4 | p∧q | ∧i | 1 | 3 |  |
| └--------------------------------------------------------------------------------------------------------------┘ | | | | | |
| 5 | p→p∧q | →i | 1-4 |  |  |
| ┌--------------------------------------------------------------------------------------------------------------┐ | | | | | |
| 6 | p∧q | Assumption |  |  |  |
| 7 | p | ∧e1 | 6 |  |  |
| └--------------------------------------------------------------------------------------------------------------┘ | | | | | |
| 8 | p∧q→p | →i | 6-7 |  |  |
| 9 | (p∧q→p)∧(p→p∧q) | ∧i | 5 | 8 |  |