**Logic Tool Results**

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Line | Expression | Rule | First Segment | Second Segment | Third Segment |
| ┌--------------------------------------------------------------------------------------------------------------┐ | | | | | |
| 1 | p∧q | Assumption |  |  |  |
| 2 | p | ∧e1 | 1 |  |  |
| 3 | q | ∧e2 | 1 |  |  |
| 4 | (p→r)∨(q→r) | Data |  |  |  |
| ┌------------------------------------------------------------------------------------------------------┐ | | | | | |
| 5 | p→r | Assumption |  |  |  |
| 6 | r | MP | 2 | 5 |  |
| └------------------------------------------------------------------------------------------------------┘ | | | | | |
| ┌------------------------------------------------------------------------------------------------------┐ | | | | | |
| 7 | q→r | Assumption |  |  |  |
| 8 | r | MP | 3 | 7 |  |
| └------------------------------------------------------------------------------------------------------┘ | | | | | |
| 9 | r | ∨e | 4 | 5-6 | 7-8 |
| └--------------------------------------------------------------------------------------------------------------┘ | | | | | |
| 10 | (p∧q)→r | →i | 1-9 |  |  |