**Logic Tool Results**

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Line | Expression | Rule | First Segment | Second Segment | Third Segment |
| 1 | p∨(q∧r) | Data |  |  |  |
| ┌--------------------------------------------------------------------------------------------------------------┐ | | | | | |
| 2 | p | Assumption |  |  |  |
| 3 | p∨q | ∨i1 | 2 |  |  |
| 4 | p∨r | ∨i1 | 2 |  |  |
| 5 | (p∨q)∧(p∨r) | ∧i | 3 | 4 |  |
| └--------------------------------------------------------------------------------------------------------------┘ | | | | | |
| ┌--------------------------------------------------------------------------------------------------------------┐ | | | | | |
| 6 | q∧r | Assumption |  |  |  |
| 7 | q | ∧e1 | 6 |  |  |
| 8 | p∨q | ∨i2 | 7 |  |  |
| 9 | r | ∧e2 | 6 |  |  |
| 10 | p∨r | ∨i2 | 9 |  |  |
| 11 | (p∨q)∧(p∨r) | ∧i | 8 | 10 |  |
| └--------------------------------------------------------------------------------------------------------------┘ | | | | | |
| 12 | (p∨q)∧(p∨r) | ∨e | 1 | 2-5 | 6-11 |