**Logic Tool Results**

Logical Expression: ¬∀xP(x)⊢∃x¬P(x)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Line | Expression | Rule | First Segment | Second Segment | Third Segment |
| 1 | ¬∀xP(x) | Data |  |  |  |
| ┌--------------------------------------------------------------------------------------------------------------┐ | | | | | |
| 2 | ¬∃x¬P(x) | Assumption |  |  |  |
| ┌------------------------------------------------------------------------------------------------------┐ | | | | | |
| 3 | X0 | Assumption |  |  |  |
| ┌----------------------------------------------------------------------------------------------┐ | | | | | |
| 4 | ¬P(X0) | Assumption |  |  |  |
| 5 | ∃x¬P(x) | ∃x i | 4 |  |  |
| 6 | ⊥ | ¬e | 2 | 5 |  |
| └----------------------------------------------------------------------------------------------┘ | | | | | |
| 7 | P(X0) | PBC | 4-6 |  |  |
| └------------------------------------------------------------------------------------------------------┘ | | | | | |
| 8 | ∀xP(x) | ∀x i | 3-7 |  |  |
| 9 | ⊥ | ¬e | 1 | 8 |  |
| └--------------------------------------------------------------------------------------------------------------┘ | | | | | |
| 10 | ∃x¬P(x) | PBC | 2-9 |  |  |