**Logic Tool Results**

Logical Expression: ∀x(P(x)→Q(x)),∃xP(x)⊢∃xQ(x)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Line | Expression | Rule | First Segment | Second Segment | Third Segment |
| 1 | ∀x(P(x)→Q(x)) | Data |  |  |  |
| 2 | ∃xP(x) | Data |  |  |  |
| 3 | X0 | None |  |  |  |
| ┌--------------------------------------------------------------------------------------------------------------┐ | | | | | |
| 4 | P(X0) | Assumption |  |  |  |
| 5 | P(X0)→Q(X0) | ∀x e | 1 |  |  |
| 6 | Q(X0) | MP | 4 | 5 |  |
| 7 | ∃xQ(x) | ∃x i | 6 |  |  |
| └--------------------------------------------------------------------------------------------------------------┘ | | | | | |
| 8 | ∃xQ(x) | ∃x e | 2 | 4-7 |  |