

1.	$\{p(\text{art}, \text{bob})\}$	$p(\text{art}, \text{bob})$
2.	$\{p(\text{art}, \text{bud})\}$	$p(\text{art}, \text{bud})$
3.	$\{p(\text{bob}, \text{cal})\}$	$p(\text{bob}, \text{cal})$
4.	$\{p(\text{bob}, \text{coe})\}$	$p(\text{bob}, \text{coe})$
5.	$\{\neg p(x, y), \neg p(y, z), g(x, z)\}$	$p(x, y) \wedge p(y, z) \Rightarrow g(x, z)$
6.	$\{\neg g(x, z), \text{goal}(x, z)\}$	$g(x, z) \Rightarrow \text{goal}(x, z)$
7.	$\{\neg p(x, y), \neg p(y, z), \text{goal}(x, z)\}$	5,6
8.	$\{\neg p(\text{bob}, z), \text{goal}(\text{art}, z)\}$	1,7
9.	$\{\neg p(\text{bud}, z), \text{goal}(\text{art}, z)\}$	2,7
10.	$\{\text{goal}(\text{art}, \text{cal})\}$	3,8
11.	$\{\text{goal}(\text{art}, \text{coe})\}$	4,8