KB $\cup \{\neg\alpha\}$:

01. $[\neg(\text{joe} = \text{sally})]$
02. $[\neg(\text{joe} = \text{bill})]$
03. $[\neg(\text{joe} = \text{ellen})]$
04. $[\neg(\text{sally} = \text{bill})]$
05. $[\neg(\text{sally} = \text{ellen})]$
06. $[\neg(\text{bill} = \text{ellen})]$
07. $[C(\text{joe})]$
08. $[C(\text{sally})]$
09. $[C(\text{bill})]$
10. $[C(\text{ellen})]$

11. $[\neg C(t), (t = \text{joe}), (t = \text{sally}), (t = \text{bill}), (t = \text{ellen})]$
12. $M(\text{joe}, \text{sally})$
13. $S(\text{bill}, \text{ellen})$
14. $[\neg M(u_1, u_2), \neg C(u_1), C(u_2)]$
15. $[\neg M(v_1, v_2), M(v_2, v_1)]$
16. $[\neg M(v_3, v_3)]$
17. $[\neg S(w_1, w_2), S(w_2, w_1)]$
18. $[\neg S(w_3, w_4), \neg M(w_3, w_4)]$
19. $[\neg M(v_4, v_5), (v_6 = v_4), \neg M(v_6, v_5)]$
20. $[M(\text{ellen}, h)]$

Resolução:

20′.	$[M(h, \text{ellen})]$	$15\{v_1/\text{ellen}, v_2/h\}, 20$
21.	$[\neg C(\text{ellen}), C(h)]$	$14\{u_1/\text{ellen}, u_2/h\}, 20$
22.	$[C(h)]$	$10, 21$
23.	$[(h = \text{joe}), (h = \text{sally}), (h = \text{bill}), (h = \text{ellen})]$	$11\{t/h\}, 22$
24.	$[\neg(x_1 = y_1), \neg(x_2 = y_2), \neg M(x_1, x_2), M(y_1, y_2)]$	igualdade: subst. em pred.
25.	$[\neg(\text{ellen} = y_1), \neg(h = y_2), M(y_1, y_2)]$	$20, 24\{x_1/\text{ellen}, x_2/h\}$
26.	$[\neg(\text{ellen} = \text{ellen}), \neg(h = \text{ellen})]$	$16\{v_3/\text{ellen}\}, 25\{y_1/\text{ellen}, y_2/\text{ellen}\}$
27.	$[(z = z)]$	igualdade: reflex.
28.	$[\neg(h = \text{ellen})]$	$26, 27\{z/\text{ellen}\}$
29.	$[(h = \text{joe}), (h = \text{sally}), (h = \text{bill})]$	$23, 28$
30.	$[\neg M(\text{bill}, \text{ellen})]$	$13, 18\{w_3/\text{bill}, w_4/\text{ellen}\}$
31.	$[\neg(x_1 = \text{bill}), \neg(x_2 = \text{ellen}), \neg M(x_1, x_2)]$	$24\{y_1/\text{bill}, y_2/\text{ellen}\}, 30$
32.	$[\neg(h = \text{bill}), \neg(\text{ellen} = \text{ellen})]$	$20′, 31\{x_1/h, x_2/\text{ellen}\}$
33.	$[\neg(h = \text{bill})]$	$27\{z/\text{ellen}\}, 32$
34.	$[(h = \text{joe}), (h = \text{sally})]$	$29, 33$
35.	$[(v_6 = \text{joe}), \neg M(v_6, \text{sally})]$	$12, 19\{v_4/\text{joe}, v_5/\text{sally}\}$
36.	$[\neg(x_3 = x_4), (x_4 = x_3)]$	igualdade: simetria
37.	$[\neg(\text{ellen} = \text{joe})]$	$3, 36\{x_3/\text{ellen}, x_4/\text{joe}\}$
38.	$[\neg M(\text{ellen}, \text{sally})]$	$35\{v_6/\text{ellen}\}, 37$
39.	$[\neg(x_1 = \text{ellen}), \neg(x_2 = \text{sally}), \neg M(x_1, x_2)]$	$24\{y_1/\text{ellen}, y_2/\text{sally}\}, 38$
40.	$[\neg(\text{ellen} = \text{ellen}), \neg(h = \text{sally})]$	$20, 39\{x_1/\text{ellen}, x_2/h\}$
41.	$[\neg(h = \text{sally})]$	$27\{z/\text{ellen}\}, 40$
42.	$[(h = \text{joe})]$	$34, 41$
43.	$[M(\text{sally}, \text{joe})]$	$12, 15\{v_1/\text{joe}, v_2/\text{sally}\}$
44.	$[(v_6 = \text{sally}), \neg M(v_6, \text{joe})]$	$19\{v_4/\text{sally}, v_5/\text{joe}\}, 43$
45.	$[\neg(\text{ellen} = \text{sally})]$	$5, 36\{x_3/\text{sally}, x_4/\text{ellen}\}$
46.	$[\neg M(\text{ellen}, \text{joe})]$	$44\{v_6/\text{ellen}\}, 45$
47.	$[\neg(x_1 = \text{ellen}), \neg(x_2 = \text{joe}), \neg M(x_1, x_2)]$	$24\{y_1/\text{ellen}, y_2/\text{joe}\}, 46$
48.	$[\neg(\text{ellen} = \text{ellen}), \neg(h = \text{joe})]$	$20, 47\{x_1/\text{ellen}, x_2/h\}$
49.	$[\neg(h = \text{joe})]$	$27\{z/\text{ellen}\}, 48$
50.	$[\ ]$	$42, 49$