

G. Mints
A Short Introduction to Modal Logic
CSLI, Stanford 1992

Corrections.

14 means line 4, 1-4 means line 4 from below.

p.2 1-2 replace 'F' by ' α '

p.3 16 delete ',' after 'monadic'

p.5 110 replace $v(\beta)$ by $v(\neg\beta)$

p.12 replace ' $\alpha \wedge \beta$ ' by ' $\alpha \vee \beta$ ' in the
second diagram

P.13 1-4 comma missing in $\gamma, \alpha \wedge \beta$

p.14 18 replace Theorem 1.1 by Theorem 1.2

p.14 1-3 repl. 1.20 by 1.19

p.16 13 \vee (the letter) instead of the disjunction sign

p.17 1-8 \vee (the letter) instead of the disjunction sign

p.20 1.-13, -5 repl. \wedge by α

p.21 1-8 insert brackets around $P(x) \wedge Q(x)$

1.-1 replace 'bottom line' by 'line at the previous stage'

p.22 14 Insert after 'before' : In particular, the procedure is
finished with a negative answer if every leaf contains an explicit
contradiction $P(a), \neg P(a)$.

18 replace 'replace' by 'replaced'

p.23 17 delete the second \neg

19 replace 2.2 by 2.3

1-8 replace both β by γ

1-8 -9 delete γ_1

p.24 1-10 repl. 2.3 by 2.4

1-6 replace 'or' by 'that is $\neg \alpha \equiv$

p.25 1.11 repl. 2.2 by 2.4

p.27 1.-2,-6 repl. 2.13 by 2.12

p.28 1.4,9,12,14,18 repl. 2.14 by 2.13

p.28 1-1 repl. branch by 'branch more than once'

p. 29 1.14, 1-4 repl. 2.15 by 2.14

p.29 1.-10 repl. subscript z by ,

p.30 14 repl. 2.16 by 2.15

p.30 1-12 repl. $q(q+1)q$ by $q(q+1)$

p.30 1-5 repl. at each by for each

p.31 replace the six occurrences of β to the right of in by $\{\text{cal B}\}$

p. 33 1.12 (2 times),17,18 (2 times),19 repl. $\{\text{cal P}\}$ by p

p.33 1-9 repl. 0 by 1

p.34 14 repl 2.21 by 2.20

p.35 11 repl. 2.22 by 2.21

p.35 1-2 repl. 2.22 by 2.21 and 2.23 by 2.22

p.40 Insert after line 10: Modal formula α is $\{\text{em modalized}\}$ if every occurrence of a propositional variable is in the scope of a \Box or \Diamond . Note that α is modalized iff α^x is closed, i.e. does not contain x free.

p. 40 1.12 delete 'predicate', 'x'

p.41 1-4 repl. modal formula by modal-like formula

p.42 11 delete 'modal'

p.43 1-11 repl. 3.9 by 3.6

1-4 repl. 3.7 by 3.4

p.44 1.-7,-6 repl 3.10 by 3.7

p.45 1.6 repl. 3.11 by 3.8

1-10 repl 3.12, 3.13 by 3.9, 3.10

1-2 repl. $(\neg \alpha, i)$ by $(\neg \Diamond \alpha, i)$, and insert a comma before it

1-1 repl k by i

p.46 1-14 repl where by if

1-14 delete 'only'

1-7 Replace 'This' by :

For example, if α is $P(x_1) \vee \forall x Q(x)$, then the corresponding \vee -inference is:

\$\$

$$\{ \{ \Gamma, (p, 1) \} \text{ \hspace{2em} } \{ \Gamma, (\Box q, 1) \} \text{ \over } \{ \Gamma, (p \vee \Box q, 1) \} \}$$

}}\$

The operation d^{mod}

p.47 13 repl. G5 by GS5

p.47 1.6 insert $\alpha \equiv$ in front of the line

p.47 115 repl d^{mod} by α^{mod}

p.47 1-4 repl. Theorem by Corollary

p.48 1.1,3 repl. 3.12 by 3.9

p.50 17 insert \Box in front of the last q

p.51 110, 118 repl. 3.14 by 3.11

p.51 1-4 repl 3.15 by 3.12

p.52 11 repl 3.1 by 3.13
 1-8 repl. 3.17 by 3.14

p.53 18 Insert (R) at the end of the line

55 1-7 replace 'modal formulas' by 'non-modal connectives'

56 1.14,16,17 change subscript n to m

p59 13 lexicographic
 1-6 insert 'of' after 'replacement'

p.61 replace the tree in example 4.1 by the following:

$$\begin{array}{l}
 (\Box p, p, \emptyset) (p, \langle 0 \rangle) (\not p, \langle 0, 0 \rangle) \\
 \hline
 (\Box p, p, \emptyset) (\not p, \langle 0, 0 \rangle) \\
 \hline
 (\Box p, \emptyset) (\not p, \langle 0, 0 \rangle) \\
 \hline
 (\Box p, \emptyset) (\not \Box p, \langle 0 \rangle) \\
 \hline
 (\Box p, \not \Box \Box p, \emptyset) \\
 \hline
 (\not (\Box p \rightarrow \Box \Box p, \emptyset))
 \end{array}$$

p61 1-1 delete $\not \Box p, \not \Box q$

p62 12,3 replace $\not q, 1$ by $\not q, \langle 1 \rangle$

p62 14 repl 2 by 4.2

p.63 113 delete \Box

p63 116 replace $s=0$ by $s=\emptyset$

p.64 12 replace the last β by $\{\text{cal } B\}$

112 insert \Box at the end

1-5 repl α^m by α^{mod}

p.64 l-1 x_1 instead of x_i

p65 l10 insert 'and' after 'formula'

p67 l-6 repl 0 by \emptyset

p.68 Theorem 4.13 (a): transpose S5-valid and T-valid

p.68 l-4. Move \Box to P.69 l.5 (after 4.13)

p69 l1 repl $R(0,i)$ by $R(\emptyset,i)$

p.69 l-13

Insert $(\alpha \Rightarrow (\alpha \rightarrow \beta)) \Rightarrow (\alpha \Rightarrow \beta)$ and hence
% notice second \rightarrow at the beginning of lb13.

p.69 l.-11. Replace reference to Theorem 4.13 by 4.13(b)

P.69 l.-10. Add 'For the formulas beginning with \Rightarrow use necessitation rule.'
before \Box .

% Comment. All formulas in (a)-(c) are first degree. Remaining
% formulas are not, but become first-degree after erasing first \Box
% occurring in the outermost \Rightarrow .

p70 l9 repl 'the same as for' by 'which falsifies also'

p73 l-8 replace 'is' by 'at'

p74 l-9 replace R by V

p75 replace Example 5.1 by:

$$(\neg \Box) \frac{(\Box p, \neg \Box p, 0) (\Box p \emptyset)}{(\Box p, \neg \Box \Box p, \emptyset)}$$

in the premise of the rule (\Box) insert a comma after (α, s)

in the premise of the rule $(\neg \Diamond)$ insert a comma after $(\neg \alpha, s)$

p.76 l.-2 Delete the first comma

p.78 l 11 replace 'or' by 'and'

l-3 $0 \leq i < n$ instead of $0 \leq i \leq n$.

p79 l-12 repl 5.6 by 5.5

p80 l-11 repl V by w_0

p.80 def. of $R(u,v)$. Change the first line to: $R_i(u,v)$ if u,v in W_i

l-2,-3 replace A by α , B by β

p82 13 repl 'is' by 'are'

p83 13 repl axioms by axiom

p84 18 repl S by K

p.85 formula (6.1) should have boxes in front of $\gamma_1, \dots, \gamma_k, \alpha$ in the conclusion of the rule. Also, the reference to it in the proof should be changed into rule (6.1) instead of rule (1) in 1-12

1-11 replace 'Lemma 2' by 'Lemma 6.2'

p.86 1.7 replace 'then' by 'the relation'

p.86 19. Replace $\boxed{\alpha}$ by α

1 10. Replace the second $\boxed{\alpha}$ by $\boxed{\alpha}$.

1-15 repl 2(c) by 6.2(c)

17,10 replace 2(a) by 6.2(a)

p87 1-2 repl 3 by 6.3 and 1 by 6.1

p88 11 repl $R(w_0, K)$ by $R(w_0, K_1)$

p90 1-10 repl \diamond by \Diamond

p91 110 repl frame by frames