

# INTERMEDIATE LOGIC

## *errata sheet*

last updated: 9/24/2015

We will update this errata sheet as necessary. Many thanks to the gracious students and teachers who have written in with corrections! These corrections will be fixed in our next printings (Spring 2015 and ever afterward, Lord willing). **Anything in blue is a new error (only one so far!),** and we will correct promptly. So, if you have a newer print run (the numbers on the bottom of the copyright page look like 15 16 17 18 19 20 21 9 8 7 6 5 4 3) **all errors should be corrected except for errors in blue.** If we update to another print run for 2016 (the 15 and the 3 will be deleted, etc.), even those errors should be corrected.

Found an error not listed here? Please email it to: [brian@canonpress.com](mailto:brian@canonpress.com). Thanks again!

LESSON	Page: TEACHER	Page: STUDENT	LOCATION	CORRECTIONS & NOTES
	T-iii		Schedules 1B & 2B	<i>Quiz Eighteen</i> should follow Lesson 38.
3	T-xviii		Note 6 table	Arrows should be above <b>p</b> and <b>q</b> .
7	T-xxxvii		Student Objectives	Complete Exercises <b>7a</b> and <b>7b</b> .
7	48		Ex. 7a #11 answer	The <b>third line exposes the invalidity</b> (not the second).
Quiz 4			#2 answer	The fourth line of truth values is: <b>T F T</b> .
Test 2A			#11	Should ask, "Are they <b>contradictory?</b> "
Test 2B			#13 answer	<b>Circle</b> the first row of truth values.
8	T-xxxviii		Note 9, second table	Truth value for <b>q</b> is <b>F</b> .
8	57		Ex. 8 #3 answer	Correct truth table: $(M \cdot R) \supset P \quad \sim(M \vee R) \quad \therefore \sim P$ F F F T T T F F F FT
8	58		Ex. 8 #5 answer	Correct truth table: $A \supset P \quad U \supset J \quad S \supset (A \vee U) \quad S \quad \therefore P \vee J$ F T F F T F T T F T F T F F F ↑
8	58		Ex. 8 #7 answer	Truth value for <b>q</b> is <b>F</b> .
8	58		Ex. 8 #11 answer	Truth value for <b>p</b> is <b>T</b> .
Quiz 5			#4 answer	The T and F under the <b>p</b> in $p \equiv r$ should be <b>circled</b> .
Quiz 5			#5 answer	The T and F under the <b>R</b> in $R \equiv D$ should be <b>circled</b> .
10	67		Ex. 10 #6 answer	The truth values under $\sim I$ should be <b>T F</b> .
11	71		Ex. 11 #5 answer	In second line of truth values, move arrow: T F F F F T F ↑
12	77		Ex. 12 #2 answer	Correct truth table: $(S \supset \sim F) \cdot (\sim S \supset \sim M) \quad S \vee \sim S \quad \therefore \sim F \vee \sim M$ T T F T T F T T F T T T F T F T F F T ↑

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Quiz 6			#4 answer	Contradictory truth values should be circled.
Test 3B			#4,6,7-10 answers	Contradictory truth values should be circled.
Unit 1 Rev	86		Add'l ex. 3 #4 ans.	Third T under $\vee$ should be F.
Unit 1 Rev	89		Add'l ex. 6 #1 ans.	Conditional should be $p \supset p$ .
Unit 1 Rev	91		Add'l ex. 7 #7 ans.	Third variable should be T (not E).
Unit 1 Rev	94		Add'l ex. 11 #2 ans.	The truth values under the biconditional should be circled (not under the disjunction).
13	103	103	Rules of Inference	<i>Modus tollens</i> is incorrectly labeled <i>Modus ponens</i> .
13	107	107	Ex. 13 #2	<i>Modus tollens</i> is incorrectly labeled <i>Modus ponens</i> .
14	T-lxiii		Student Objectives	Complete Exercises 14a and 14b.
14	114-5		Ex. 14a & 14b points	14a #16 is worth (4) points. Ex 14b is 24 points total.
15	120	120	Ex. 15a #14	Problem should read: 1) $X \supset \vee$ 2) $\vee \supset W$ 3) $\sim(X \bullet W) / \therefore \sim X$
Test 4B*			#11 q & a	Question should read: $p \supset q$ $\sim q$ $\therefore \sim p$ Answer to that is M.T. (So M.P. isn't duplicated.)
16*	T-lxxvii		Assignments	Have the students complete Exercise 16. (No part b).
Quiz 9			#9	Problem should read: $(p \equiv q) \equiv (p \supset q) \bullet (q \supset p)$
17	T-lxxxi		Student Objectives	Complete Exercises 17a and 17b.
18	T-xcii		Note 6 proof	Step 6 should read: $P \supset (P \bullet \sim Q)$ 2 Abs
19	147		Ex. 19 #3	Step 4 should read: P 2,3 D.S.
20	151		Ex. 20 #3	Problem 3 title: <i>Modus tollens</i> .
21	T-cv-cvi			In first printings, T-cv and T-cvi are missing. Download the complete Lesson 21 notes on the product page.
Unit 2 Rev	172	172	Add'l ex. 20 #1	The first problem should say "prove without using... <i>Modus tollens</i> ..." (instead of <i>Modus ponens</i> )
22	T-cxvi		Note 13, second table	$\begin{array}{ccc} P & Q & R \\ T & T & R \\ T & T & T \end{array}$
23	T-cxix		Note 11 set	Set should be $\{\sim(P \supset Q), Q \supset P, \sim P \supset R\}$
23	191		Ex. 23 #4 answer	Steps 4 and 5 should be: 4) G $\sim G$ 1 $\equiv$ D 5) H $\sim H$ 1 $\equiv$ D
24	T-cxxii		Note 6 truth tree	Step 3 should be P (not $\sim P$ ). Both Step 3 & Step 4 justifications should be $(2 \sim \supset P)$ . Step 5 justification should be $(1 \sim \bullet D)$ .
24	194	194	second truth tree	Step 3 should be P (not $\sim P$ ). Both Step 3 & Step 4 justifications should be $(2 \sim \supset P)$ . Step 5 justification should be $(1 \sim \bullet D)$ .

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25	204		Ex. 25 #8 answer	Negation (first line) should be $\sim[\sim(P \bullet \sim Q)] \equiv (Q \vee \sim P)$ ✓
25	203-4		Ex 25 points	Total: (57 points); #3 is (6) points
27	213		Ex. 27 #3-5 points	#3 is (8) points, #4 is (12), #5 is (12)
Test 7A			#2 answer	Left branch should be marked closed with $\times$ below B.
Test 7B			#3 answer	Left branch should be marked closed with $\times$ below p.
Unit 3 Rev	217		Add'l ex. 22 #2 ans.	Step 7 "steps used" should be $4x7$ .
Unit 3 Rev	220		Add'l ex. 23 #8 ans.	Justification for steps 6 & 7 is: $3 \sim \vee D$ .
Unit 3 Rev	223		Add'l ex. 26 #1 ans.	Step 9 should be $\sim P$ .
Unit 3 Rev	224		Add'l ex. 27 #1 ans.	Step 7 "steps used" should be $5x7$ and $6x7$ .
28	239		Ex. 28c Challenge ans.	Second proof justification steps 9-11 should be: 9) 1,8 MP 10) 2,9 MP 11) 5,7 MT
29	251		Ex. 29 points	12 points total (each # is worth 3 points).
30	257		Ex. 30 points	26 points total (#1 = 7; #2 = 1,1,2,2,3; #3 = 1,2,2,2,3)
30	257		Ex. 30 #3 answer	Answers for a-e: 111, 10110, 100000, 111111, 10100101
31	T-clix		Note 10 examples	Demonstrating subtraction problem (not addition).
31	T-clix		Note 11 answers	Answers for fifth subtraction problem is 110.
31	263		Ex. 31 points	43 points total (#1-6 = 2,2,3,3,3,4; #7-12 = 2,3,3,2,3,1; #13-15 = 3,4,5)
31	263		Ex. 13 #14 answer	Steps 2 (00000) & 3 (10110) should be switched in order.
Quiz 11			#11 answer	answer is 100000
32	266	266	AND truth table	AND truth table inputs are p and q (not $\sim p$ ).
32	269		Ex. 32 points	21 points total (#1-4 = 3,3,4,4; #5-6 = 3,4)
33	275		Ex. 33 points	18 points total (#1-3 = 4,7,7)
34	281-2		Ex. 34 points	35 points total (#1-4 = 5,8,10,12)
35	289-90		Ex. 35 points	27 points total (#1-4 = 8,10,4,5)
35	289		Ex. 35 #3 answer	Output for #3 is $p \bullet \sim q$ .
36	292	292	3rd circuit on page	The circuit's unsimplified proposition is: $[A \vee (B \bullet \sim B)] \bullet C$
36	295		Ex. 36 points	18 points total (#1-3 = 4,4,5,5)
36	296		Ex. 36 #4 answer	Second input is B (not C).
37	300	300	simplification proof	Delete the fourth step: $(\sim A \bullet \sim C) \bullet (B \vee \sim B)$ — Commutation
37	301-2		Ex. 37 points	34 points total (#1-6 = 4,5,7,5,6,7)
Quiz 18*				Give Quiz 18 after teaching Lesson 38.
38	305		Ex. 38 points	12 points total (#1-3 = 3,4,5)
39	T-clxc		Note 5 circuits	Variables should obviously be p and q (not A, B, & C).
39	311-12		Ex. 39 points	25 points total (#1-4 = 4,5,7,9)

40	316	316	first paragraph	second set of parentheses should read $p \cdot \sim q \cdot r$
40	321-2		Ex. 40a points	30 points total (#1-3 = 12,8,10)
Quiz 19*				Give Quiz 19 before Exercise 40b.
40	323-5		Ex. 40b points	100 points total (Directions 1-4 = 7,28,35, 30)
Quiz 19			#2 answer	Third column of truth values should be under the $q$ (not the XOR gate). Fourth column of truth values should be under the $q$ (not the XNOR gate).
Test 8A			#6, #7, #8 answers	6. 101001 7. 1110101 8. [truth values for X, in vertical column] 00101110
Test 8B			#2, #7 answers	2. $a = 0, b = 1, c = 1, d = 0, e = 0, f = 1, g = 1$ 7. 1000001
Unit 5 Rev	331		Add'l ex. 29 #1, #3 answers	1. $a = 1, b = 1, c = 1, d = 0, e = 0, f = 0, g = 0$ 3. $a = 1, b = 1, c = 0, d = 1, e = 1, f = 0, g = 1$
Unit 5 Rev	333	333	Add'l ex. 31 #10-12 problems	10. problem should be 100 x 1011 11. problem should be 101 x 11 12. problem should be 1001 x 101
Unit 5 Rev	336		Add'l ex. 34 #1-2 ans	1. proposition: $A \cdot \sim B$ 2. proposition: $(\sim A \cdot B \cdot C) \vee (A \cdot \sim B \cdot C) \vee (A \cdot B \cdot C)$
Unit 5 Rev	344		Add'l ex. 39 #3 ans	Step 3) $\sim A \cdot (B \equiv C)$ Definition of XNOR
Unit 5 Rev	350		Add'l ex. 40 #4 ans	Proposition for output D could be: $P \vee \sim (Q \vee S) \vee [R \oplus (Q \cdot S)]$
Comp. Exam B			#20 answer	variable input order (vertically) should be P, R, Q (not p, q, r)
Appx. B	353	353	Rule #2	Rule name should be <i>Modus tollens</i> .
Appx. C	355	355	Biconditional decomposition	The p in the right column of the tree should be ne- gated: $\sim p$ . (See correct version on page 187.)
DVD #	LESSON	LOCATION	CORRECTION	
			We haven't been notified of any errors for the DVD.	