

ERRATA

Algebra Mal-Rules and Cognitive Accounts of Error

STEPHEN J. PAYNE AND HELEN R. SQUIBB

University of Lancaster

The above article was published in *Cognitive Science*, Volume 14, Number 3, pp. 445-481. The publisher regrets that it appeared with several errors. The corrections of these errors are presented herewith.

On page 453, line M11 of Table 3 entitled, "Mal-rules for School 1," should have been printed to read as follows:

$$\begin{array}{l} Mx + | - N = Px + | - Q - \\ Mx + Px = N + Q \end{array}$$

On page 457, Table 7 entitled "Distribution of Mal-Rules Across Question Types" contained two misrepresented symbols within the table. Thus, in the line adjacent to number 4, under the table column heads M12 and M13, the plus symbols after the number 2 digits should have been superscript swords. The footnote to this table was also in error due to an asterisk which should have been a superscript sword. The complete and corrected table is reprinted on p. 642.

On page 479, the Appendix entitled, "Algebra Problems Used in 3 Studies," two numbered equations under Test A should have read as follows:

$$\begin{array}{l} 16. 7x = 8 + 3(2x + 1) \\ 23. 21 - 6x = 3 \end{array}$$

TABLE 7
Distribution of Mal-Rules Across Question Types

Bracket Operation Mal-rules	Mal-rules									
	M1	M2	M3	M4	M5	M6	M7	M8		
Question Type										
8. $Mx = N (P \cdot Q)$	10	N/A	N/A	33	3	N/A	0	N/A		
9. $Mx = N (Px + Q)$	26	12	N/A	N/A	4	N/A	2	1		
10. $Mx = N + (P \cdot Q)$	1†	0	N/A	1†	0	N/A	0	0		
12. $Mx = N + P (Qx + R)$	30	7	31	N/A	5	10	5	2		
13. $Mx + N (x + P) = Q$	13	9	N/A	N/A	2	9	4	2		
Remaining Mal-rules										
	M9	M10	M11	M12	M13	M14	M15	M16	M17	M19
Question Type										
1. $Mx = P$	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2. $Mx = N + P$	N/A	N/A	N/A	1†	N/A	7	4	N/A	2	0
3. $Mx = N \cdot P$	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A	N/A
4. $Mx + Nx = P$	N/A	N/A	N/A	2†	2†	5	5	N/A	0	0
5. $Mx + N = P$	20	N/A	N/A	4	2	1	0	N/A	0	2
6. $M + Nx = P$	31	1†	N/A	9	1	1	0	N/A	0	0
7. $Mx = Nx + P$	N/A	22	N/A	11	5	1	3	N/A	4	1
8. $Mx = N (P \cdot Q)$	3†	N/A	N/A	N/A	N/A	N/A	N/A	1†	0	0
9. $Mx = N (Px + Q)$	N/A	13	3†	18	12	0	7	N/A	2	3
10. $Mx = N + P \cdot Q$	N/A	N/A	N/A	N/A	N/A	2	4	3	3	0
11. $M + Nx + Px = Q$	12	4†	2†	9	1	10	0	N/A	2	1
12. $Mx = N + P (Qx + R)$	2†	13	N/A	26	20	13	3	N/A	2	0
13. $Mx + N (x + P) = Q$	7	N/A	N/A	15	1	4	2	N/A	1	1
14. $Mx + N = Px + Q$	9	3	25	8	5	1	1	N/A	1	2

Note. † marks occurrences on question types for which the starting equation does not present an opportunity for the mal-rule.

Correspondence and requests for reprints should be sent to S.J. Payne, User Interface Institute, IBM Thomas J. Watson Research Center, Box 704, Yorktown Heights, NY 10598.