Errata

F. J. Pelletier: '75 Problems for testing automatic theorem provers', *J. Automated Reasoning* **2**, 191–216 (1986). (Received: 5 November 1987)

No doubt another reason (besides the ones mentioned in the above paper) that people have not tried to collect a list of problems for ATPs is that it is very difficult to keep all the details correct through the process of writing, testing, typing, correcting, typesetting, and printing. Art Quaife (Trans Time Inc., Oakland CA) and John Pollock (Philosophy Dept., Univ. Arizona) have informed me of the mistakes listed below. I would appreciate it if researchers who find other difficulties in the problems would write to me also. As remarked in the paper (p. 216), the "convert to clause form" program is not perfect – it only performs rudimentary subsumption and factoring. This flaw does not affect the validity of the arguments, since the various versions of the clauses generated are equivalent.

Problem #15: The natural form should make the second 'q' be a 'p'.

Problem #28: The natural form of the first premise should be '$(Ax)[Px \rightarrow (Ax)Qx]$'. The first clause should be '$\sim Px + Qy$'.

Problem #34: The third occurrence of 'P' should be 'Q'.

Problem #40: In the second line of the natural form: 'Fxy' should be 'Fzy'. The first literal of the third clause should be '$\sim Fy, f(x)$' and the second literal of the fourth clause should be '$Fy, f(x)$'. (The original problem is also valid, but not what was intended.)

Problem #54: The last 'Fxu' of the natural form should be 'Fzu'. To the fourth clause, add the literal '$\sim Fzy$', and add the clause: $Fxa + Fi(x, y), h(x) + \sim Fy, h(x)$ to the problem.

Problem #55: In the third-to-last premise of natural form: 'Hbz' should be 'Hbx'.

Problem #56: the natural form contains an extra closing ')'.

Problem #60: the natural form is missing a closing ']'.

Problem #60, clause form: In clauses 1 and 6, the occurrences of the literal $\sim Fby$ should both be $\sim Fyb$.

Problem #62 is stated incorrectly. It should be:

Natural Form	*Negated Clause Form*
$(Ax)[(Fa \ \& \ (Fx \rightarrow Ff(x))) \rightarrow Ff(f(x))] \rightarrow$	Fa
$(Ax)[[\sim Fa + Fx + Ff(f(x))] \ \&$	$\sim Ff(y) + Ff(f(x)) + Fx + \sim Fa$
$[\sim Fa + \sim Ff(x) + Ff(f(x))]]$	$Fy + Ff(f(x)) + Fx + \sim Fa$
	$\sim Fc + Ff(c) + Ff(f(x)) + Fx + \sim Fa$
	$\sim Ff(f(c)) + Ff(f(x)) + Fx + \sim Fa$
	$\sim Ff(f(c)) + Ff(f(x)) + \sim Ff(x) + \sim Fa$
	$\sim Fc + Ff(c) + Ff(f(x)) + \sim Ff(x) + \sim Fa$
	$Fy + Ff(f(x)) + \sim Ff(x) + \sim Fa$
	$\sim Ff(y) + Ff(f(x)) + \sim Ff(x) + \sim Fa$
	$\sim Ff(f(c)) + Ff(b) + \sim Fb$
	$\sim Fc + Ff(c) + Ff(b) + \sim Fb$
	$\sim Fa + Fy + Ff(b) + \sim Fb$
	$\sim Fa + \sim Ff(y) + Ff(b) + \sim Fb$

Problem #73: (d) should start '$(Ax)(\ldots..$'

I wish to emphasize here that these errors were due to the items mentioned at the outset, not to *JAR*. I take full responsibility.