

3.38 | joint account contains \$100 initially.

then the following three concurrent actions occur:

$l \rightarrow \text{Peter} : (\text{set! balance } (+ \text{ balance } 10))$

$m \rightarrow \text{Paul} : (\text{set! balance } (- \text{ balance } 20))$

$n \rightarrow \text{Mary} : (\text{set! balance } (- \text{ balance } (/ \text{ balance } 2)))$

- (a) All possible values for the atomized execution of l, m, n in some order is given by the permutations over l, m, n , producing $3 \times 2 \times 1 = 6$ possible executions.

$(l, m, n) : 45$

$(l, n, m) : 35$

$(m, l, n) : 45$

$(m, n, l) : 50$

$(n, l, m) : 40$

$(n, m, l) : 40$

Thus, $\{35, 40, 45, 50\}$.

- (b) The other values possible, for interleaved execution, are the "internal" ("non-end") values produced, not by, but during execution of the permutations above. i.e.: $\{30, 55, 60, 80, 90, 110\}$. They could then happen by checking balance before some subset of other operations are carried out, but finishing the set! - call after all other execution.

