

Problem 4

a) $in1 = \boxed{1 \mid P1} \rightarrow \boxed{2 \mid P2} \rightarrow \boxed{3 \mid P3} \rightarrow \boxed{4 \mid P4} \rightarrow \boxed{NULL}$

$in2 = \boxed{5 \mid P5} \rightarrow \boxed{6 \mid P6} \rightarrow \boxed{NULL}$

$llrec(P1, P5)$

↓

$P1 \rightarrow next = llrec(P5, P2)$

return $P1 \rightarrow \boxed{1}$

$llrec(P5, P2)$

↓

$P5 \rightarrow next = llrec(P2, P6)$

return $P5 \rightarrow \boxed{5}$

$llrec(P2, P6)$

↓

$P2 \rightarrow next = llrec(P6, P3)$

return $P2 \rightarrow \boxed{2}$

$llrec(P6, P3)$

↓

$P6 \rightarrow next = llrec(P3, nullptr)$

return $P6 \rightarrow \boxed{6}$

$llrec(P3, nullptr)$

LD return $P3 \rightarrow \boxed{3}$

returned: 1, 5, 2, 6, 3

b) $in1 = null$

$in2 = \begin{array}{|c|} \hline 2 \\ \hline \end{array} \rightarrow \begin{array}{|c|} \hline null \\ \hline \end{array}$

$in1 == null \text{ ptr}$ ✓ returned:

return $in2 \rightarrow$

$\begin{array}{|c|} \hline 2 \\ \hline \end{array}$