

MEMOIZED-CUT-ROD-AUX(p, n, r)

if $r[n] \geq 0$

return $r[n]$

if $n == 0$

$q = 0$

else $q = -\infty$

for $i = 1$ **to** n

$q = \max(q, p[i] + \text{MEMOIZED-CUT-ROD-AUX}(p, n - i, r))$

$r[n] = q$

return q