Rod Cutting Algorithm

```
EXTENDED-BOTTOM-UP-CUT-ROD(p, n)
 1  let r[0:n] and s[1:n] be new arrays
 2  r[0] = 0
 3  for j = 1 to n                    // for increasing rod length j
 4      q = -∞
 5      for i = 1 to j                // i is the position of the first cut
 6          if q < p[i] + r[j - i]
 7              q = p[i] + r[j - i]
 8              s[j] = i              // best cut location so far for length j
 9      r[j] = q                      // remember the solution value for length j
10  return r and s
```

```
PRINT-CUT-ROD-SOLUTION(p, n)
1  (r, s) = EXTENDED-BOTTOM-UP-CUT-ROD(p, n)
2  while n > 0
3      print s[n]          // cut location for length n
4      n = n - s[n]        // length of the remainder of the rod
```