

[2, 7, 9, 3, 1]

[2 | 7 | 11 | 4 | 12]

$$i = 0$$

$$dp[0] = 2$$

$$dp[1] = \max(2, 7) = 7$$

$$i = 2$$

$$i < 5$$

$$dp[2] = \max(9+2, 7) = 11$$

$$i = 3$$

$$i < 5$$

$$dp[3] = \max(3+7, 11) = 11$$

$$i = 4$$

$$i < 5$$

$$dp[4] = \max(1+11, 11) = 12$$