

## Best Time to Buy and Sell Stock

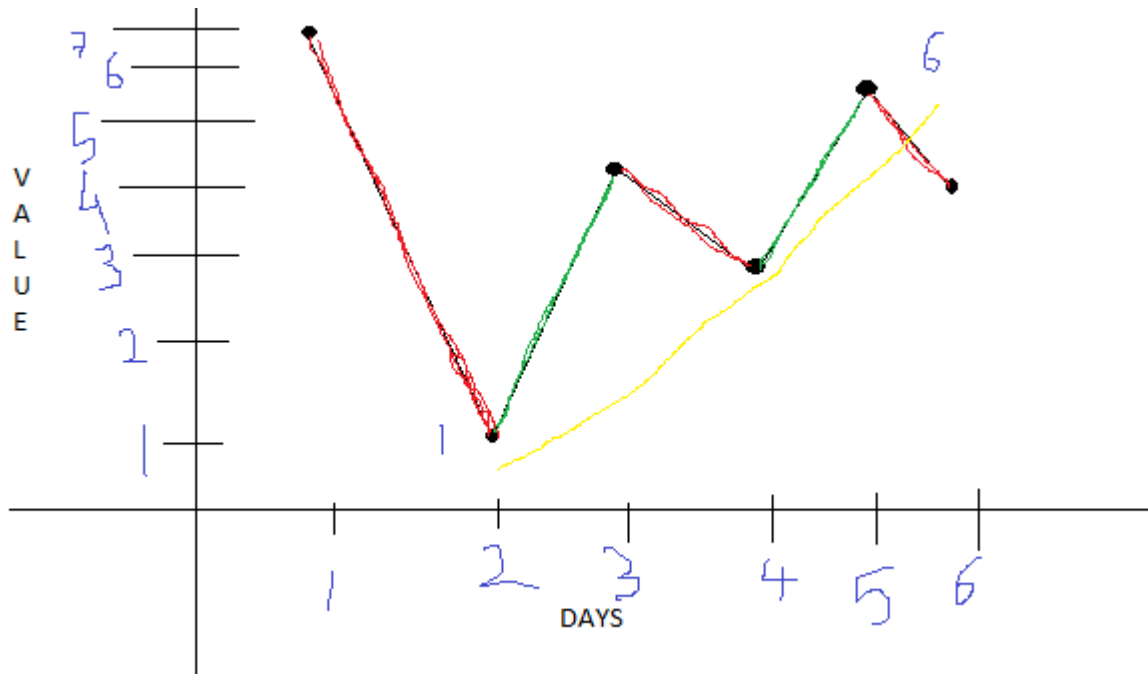
**Problem Statement:** You are given an array `prices` where `prices[i]` is the price of a given stock on the `ith` day.

You want to **maximize** your profit by choosing a single day to buy one stock and choosing a different day in the future to sell that stock.

Return *the maximum profit you can achieve from this transaction*. If you cannot achieve any profit, return 0.

**Solution:**

7	1	5	3	6	4
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Buy on day 2 (price = 1) and sell on day 5 (price = 6),  
profit =  $6 - 1 = 5$ .

Using Two Pointer approach:

7	1	5	3	6	4
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```
L = 7 1 1 1 1 (if R < L then L = R)
```

```
R = 1 5 3 6 4 ( R = 1 ----> n)
```

```
P = 0 -6 4 2 5 3 (if R - L > P then  
P = R - L )
```

```
P = 5
```

```
TC :  $O(n)$ 
```

```
SC :  $O(1)$ 
```