



Explanation

Why $dp[0][0]$:

The key is understanding **what each cell represents**:

- $dp[0][0] = 2$: Maximum profit starting from day 0 when we **can buy** (don't own stock)
- $dp[0][1] = 4$: Maximum profit starting from day 0 when we **must sell** (already own stock)

The Critical Point:

$dp[0][1] = 4$ assumes we **already own a stock at the beginning** (before day 0). But this is impossible in our problem!

We always start with no stock owned, so the realistic starting state is $dp[0][0]$.

What $dp[0][1] = 4$ Actually Means:

"If I magically already owned a stock at the start of day 0, I could sell it for price 2, then buy at price 2 and sell at price 4, making total profit of 4."

But this is unrealistic because:

1. We don't start with any stock
2. If we "magically" had stock, we never paid for it initially

The Correct Interpretation:

- $dp[0][0] = 2$ is the answer because it represents the maximum profit starting from the realistic initial state (no stock owned)
- $dp[0][1] = 4$ is just a computed value for the DP recurrence, but doesn't represent a valid starting scenario

Think of it this way: You can't start the game by selling something you never bought! The problem asks for profit starting from day 0 with an empty portfolio, which is exactly what `dp[0][0]` represents.