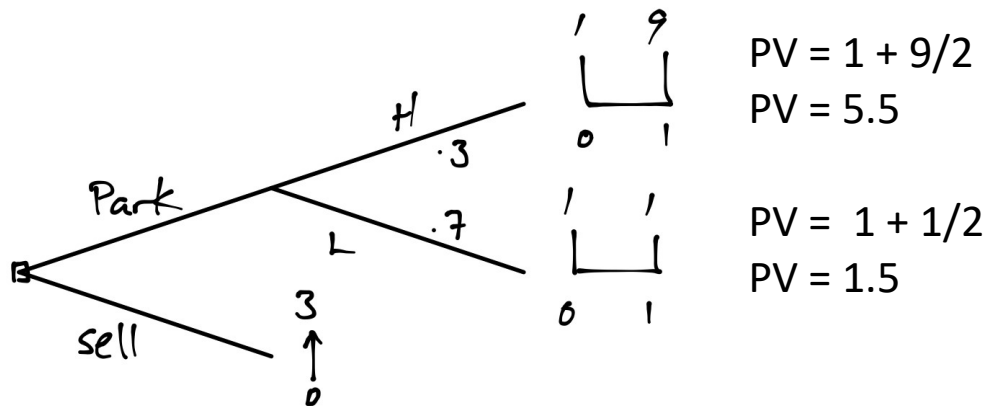


Solution: Option value of preserving a park

Initial data:

Park at 0: \$1M
Park at 1, high value (H): \$9M, 30%
Park at 1, low value (L): \$1M, 70%
Convert to mine: \$3M in either period
r: 100%

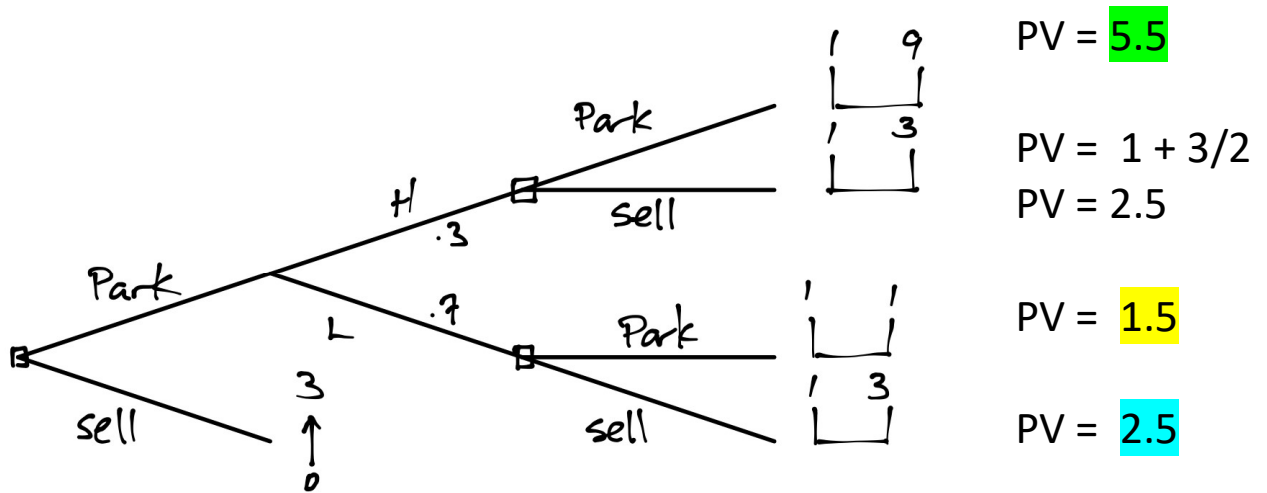
Part 1: once and for all decision:



EV of preserving: $0.3 \cdot 5.5 + 0.7 \cdot 1.5 = 2.7$

Decision: sell

Part 2: true decision tree:



EV of preserving: $0.3 * 5.5 + 0.7 * 2.5 = 3.4$

Decision: preserve

Option value:

Gain if convert: $2.5M - 1.5M = 1M$

Probability of converting: 0.7

Value of option: $0.7 * 1M = 700k$