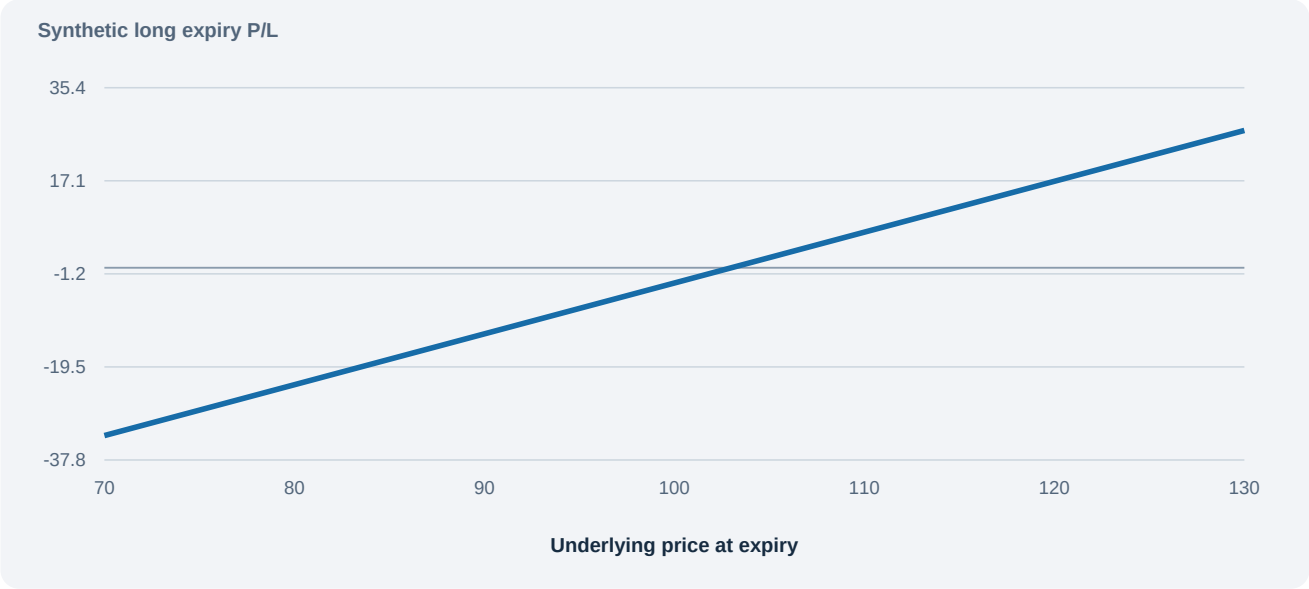
Synthetic-long expiry arithmetic

Option sensitivities | Original synthetic example | Edition 2026-11-26

A long call and short put at the same strike and expiry have a combined expiry payoff equal to underlying minus strike. Their initial net premium determines the eventual P/L.

FORMULA Expiry P/L = underlying - strike - net debit

SCENARIO 01: Synthetic expiry scenario; reference strike 100



WORKED EXAMPLE

Long call / short put at strike 100, net debit 3: expiry break-even is 103. No fees or settlement frictions.

COMMON MISTAKE

Calling the position fully paid because its premium is small ignores its linear downside and collateral needs.

BEFORE YOU USE THE CALCULATION

1. Match strikes and expiries.
2. Include the net opening premium.
3. Model settlement and margin separately.

COMPARE TWO MORE INPUT SETS

Scenario 05: Synthetic expiry scenario; reference strike 140. Long call / short put at strike 140, net debit 5: expiry break-even is 145. No fees or settlement frictions.

Scenario 10: Synthetic expiry scenario; reference strike 190. Long call / short put at strike 190, net debit 7.5: expiry break-even is 197.5. No fees or settlement frictions.

Synthetic values are not historical market data. Educational material; trading can result in substantial losses.