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import numpy as np
import matplotlib.pyplot as plt

def option_payoff(call_strike1, call_strike2, put_strike1, put_strike2,
                  call_price1, call_price2, put_price1, put_price2, stock_price_today):
    # Generate future stock prices from 0 to 2 * current stock price
    future_prices = np.linspace(0, 2 * stock_price_today, 1000)

    # Calculate payoffs
    call_payoff1 = np.maximum(future_prices - call_strike1, 0)
    call_payoff2 = np.maximum(future_prices - call_strike2, 0)
    put_payoff1 = np.maximum(put_strike1 - future_prices, 0)
    put_payoff2 = np.maximum(put_strike2 - future_prices, 0)

    # Total payoff
    total_payoff = (call_payoff1 - call_price1) + (call_payoff2 - call_price2) + \
                   (put_payoff1 - put_price1) + (put_payoff2 - put_price2)

    # Plot payoff
    plt.figure(figsize=(10, 6))
    plt.plot(future_prices, total_payoff, color='black', linewidth=2)

    plt.axhline(0, color='gray', linestyle='--')
    plt.title('Portfolio payoff function')
    plt.xlabel('Future Stock Price')
    plt.ylabel('Payoff')
    plt.grid()
    plt.show()

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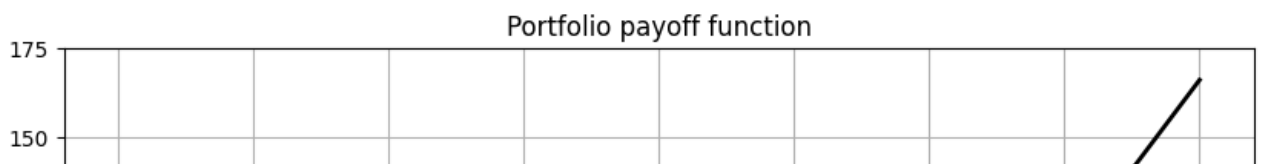
# Example
call_strike1 = 100
call_strike2 = 120
put_strike1 = 80
put_strike2 = 60
call_price1 = 5
call_price2 = 3
put_price1 = 4
put_price2 = 2
stock_price_today = 100

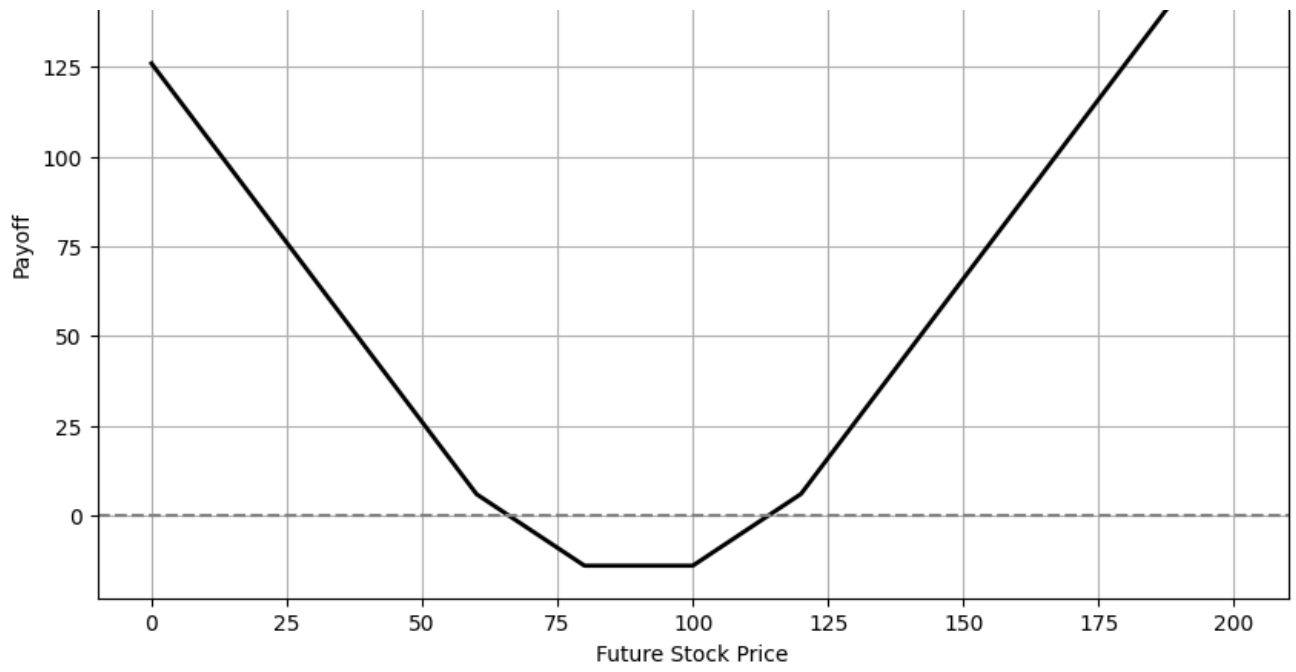
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              call_price1, call_price2, put_price1, put_price2, stock_price_today)

```





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