

Problem 4

Friday, October 4, 2024 12:34 PM

a) Given Bear spread, the initial investment is,

$$\text{Initial investment} = \$ \text{Buy} - \text{sell} = 4,75 - 2,15 = 2,60$$

The payoff,

$$\text{Pay off} = \max(K - S_T, 0)$$

Given stock = \$23,

$$\text{Long put strike (29)} \Rightarrow \max(29 - 23, 0) = 6$$

$$\text{Short put (25)} \Rightarrow -\max(25 - 23, 0) = -2$$

$$\underline{\underline{\text{Total} = 6 - 2 = 4}}$$

b) Stock Price = 28

$$\text{Long put (Strike 29)} = \max(29 - 28, 0) = 1$$

$$\text{Short put (Strike 25)} = -\max(25 - 28, 0) = 0$$

$$\underline{\underline{\text{Total} = 1 - 0 = 1}}$$

c) Stock price (33)

$$- \text{Long put (Strike 29)} \Rightarrow \max(29 - 33, 0) = 0$$

$$- \text{Short put (Strike 25)} \Rightarrow -\max(25 - 33, 0) = 0$$

$$\underline{\underline{\text{Total} = 0 - 0 = 0}}$$