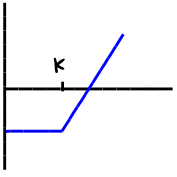
Long Call

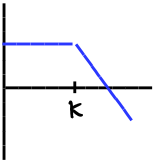


- you expect the asset price to increase

payoff = $\max(S_T - K)$

- unlimited gains

Short Call

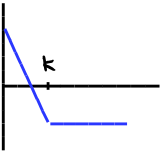


- you expect the asset price to decrease

payoff = $\max(S_T - K)$

- unlimited loss

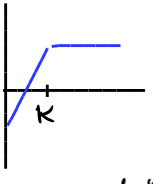
Long Put



- expect the asset price to decrease

payoff = $\max(K - S_T, 0)$

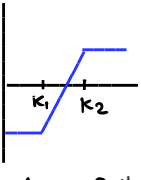
Short Put



- you expect the asset price to increase

payoff = $\max(K - S_T, 0)$

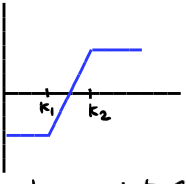
Bull Spread (Call)



- Long Call + Short call

Range	Payoff
$S_T \leq K_1$	0
$K_1 \leq S_T \leq K_2$	$S_T - K_1$
$S_T \geq K_2$	$K_2 - K_1$

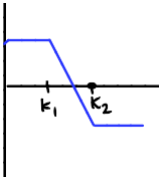
Bull Spread (Puts)



- Long put + Short put

Range	Payoff
$S_T \leq K_1$	$K_1 - K_2$
$K_1 \leq S_T \leq K_2$	$S_T - K_2$
$S_T \geq K_2$	0

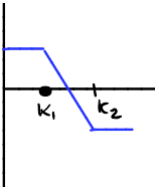
Bull Spread (calls)



↳ short call + long call

Range	Payoff
$S_T \leq K_1$	0
$K_1 \leq S_T \leq K_2$	$K_1 - S_T$
$S_T \geq K_2$	$K_1 - K_2$

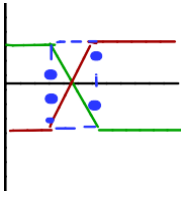
Bull Spread (Put)



↳ short put + long put

Range	Payoff
$S_T \leq K_1$	$K_2 - K_1$
$K_1 \leq S_T \leq K_2$	$K_2 - S_T$
$S_T \geq K_2$	0

Box Spread

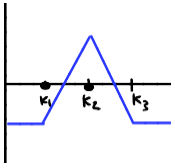


★ European only.

↳ bull call + bear put

Range	Payoff
$S_T \leq K_1$	$K_2 - K_1$
$K_1 \leq S_T \leq K_2$	$K_2 - K_1$
$S_T \geq K_2$	$K_2 - K_1$

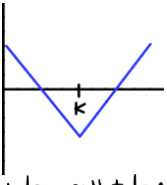
Butterfly Call



↳ long call + 2 short calls + long call

Range	Payoff
$S_T \leq K_1$	0
$K_1 \leq S_T \leq K_2$	$S_T - K_1$
$K_2 \leq S_T \leq K_3$	$K_3 - S_T$
$K_3 \geq S_T$	0

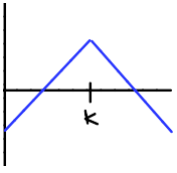
Straddle (long)



↳ long call + long put

Range	Payoff
$S_T \leq K$	$K - S_T$
$S_T > K$	$S_T - K$

Straddle (short)



↳ Short call + Short put

Range	Payoff
$S_T \leq K$	$S_T - K$
$S_T > K$	$K - S_T$

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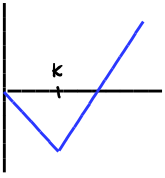
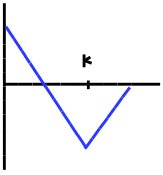
Strap (long)



└ 2 long call + 1 long put

Range	Payoff
$S_T \leq K$	$K - S_T$
$S_T > K$	$2(S_T - K)$

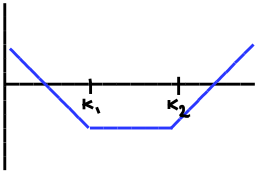
Strap (put)



└ 2 long put + long call

Range	Payoff
$S_T \leq K$	$2(K - S_T)$
$S_T > K$	$S_T - K$

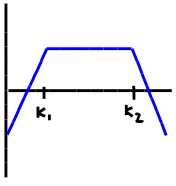
Strangle (long)



└ long put + long call

Range	Payoff
$S_T \leq K_1$	$K_1 - S_T$
$K_1 \leq S_T \leq K_2$	0
$S_T \geq K_2$	$S_T - K_2$

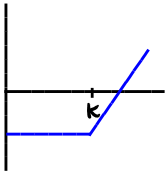
Strangle (short)



└ short put + short call

Range	Payoff
$S_T \leq K_1$	$S_T - K_1$
$K_1 \leq S_T \leq K_2$	0
$S_T > K_2$	$K_2 - S_T$

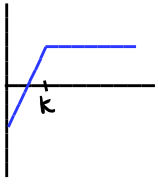
Protective Put



└ long put + long the stock

payoff: $\max([S_T - K], 0)$

Covered Call



└ shorting a call, long the stock

payoff: $\max([K - \text{Spot}], 0)$

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