1. Let $C(K,T)$ and $P(K,T)$ be the **time 0** premium (price) of the K-strike call option and K-strike put option with ***T* years to expiration** respectively.
2. Assume the underlying asset pays no dividends.

	Floors	**Caps**	**Covered Call**	**Covered Put**	**Bull Spread**	**Bear Spread**
At $t = 0$	Long a K-strike put + Long the underlying asset	Long a K-strike call + Short the underlying asset	Sell a K-strike call + Long the underlying asset	Sell a K-strike put + Short the underlying asset	Long a K_1-strike call + Sell a K_2-strike call	Sell a K_1-strike call + Long a K_2-strike call
Cost @ $t = 0$	$P(K, T) + S_0$	$C(K, T) - S_0$	$-C(K, T) + S_0$	$-P(K, T) - S_0$	$C(K_1, T) - C(K_2, T)$	$-C(K_1, T) + C(K_2, T)$
Payoff @ T	$\max(K - S_T, 0) + S_T$	$\max(S_T - K, 0) - S_T$	$-\max(S_T - K, 0) + S_T$	$-\max(K - S_T, 0) - S_T$	$\max(S_T - K_1, 0) - \max(S_T - K_2, 0)$	$-\max(S_T - K_1, 0) + \max(S_T - K_2, 0)$
Profit @ T	$\max(K - S_T, 0) + S_T - FV(P(K, T) + S_0)$	$\max(S_T - K, 0) - S_T - FV(C(K, T) - S_0)$	$-\max(S_T - K, 0) + S_T - FV(-C(K, T) + S_0)$	$-\max(K - S_T, 0) - S_T - FV(-P(K, T) - S_0)$	$\max(S_T - K_1, 0) - \max(S_T - K_2, 0) - FV(C(K_1, T) - C(K_2, T))$	$-\max(S_T - K_1, 0) + \max(S_T - K_2, 0) - FV(-C(K_1, T) + C(K_2, T))$
Remark					➢ Both calls have the same maturity ➢ $K_1 < K_2$. ➢ Can be constructed using puts.	➢ Both calls have the same maturity ➢ $K_1 < K_2$. ➢ Can be constructed using puts.

	Collar	**Straddles**	**Written Straddles**	**Strangles**	**Butterfly Spreads**
At $t = 0$	Long a K_1-strike put + sell a K_2-strike call	Long a K-strike call + Long a K-strike put	Sell a K-strike call + sell a K-strike put	Long a K_1-strike put + Long a K_2-strike call	Sell a K-strike call + sell a K-strike put + Long a K_2-strike call + Long a K_1-strike put
Cost @ $t = 0$	$P(K_1, T) - C(K_2, T)$	$C(K, T) + P(K, T)$	$-C(K, T) - P(K, T)$	$P(K_1, T) + C(K_2, T)$	$-C(K, T) - P(K, T) + C(K_2, T) + P(K_1, T)$
Payoff @ T	$\max(K_1 - S_T, 0) - \max(S_T - K_2, 0)$	$\max(S_T - K, 0) + \max(K - S_T, 0)$	$-\max(S_T - K, 0) - \max(K - S_T, 0)$	$\max(K_1 - S_T, 0) + \max(S_T - K_2, 0)$	$-\max(S_T - K, 0) - \max(K - S_T, 0) + \max(S_T - K_2, 0) + \max(K_1 - S_T, 0)$
Profit @ T	$\max(K_1 - S_T, 0) - \max(S_T - K_2, 0) - \text{FV}(P(K_1, T) - C(K_2, T))$	$\max(S_T - K, 0) + \max(K - S_T, 0) - \text{FV}(C(K, T) + P(K, T))$	$-\max(S_T - K, 0) - \max(K - S_T, 0) + \text{FV}(C(K, T) + P(K, T))$	$\max(K_1 - S_T, 0) + \max(S_T - K_2, 0) - \text{FV}(P(K_1, T) + C(K_2, T))$	$-\max(S_T - K, 0) - \max(K - S_T, 0) + \max(S_T - K_2, 0) + \max(K_1 - S_T, 0) - \text{FV}(-C(K, T) - P(K, T) + C(K_1, T) + P(K_2, T))$
Remark	➢ Both options have the same maturity ➢ $K_1 < K_2$.			➢ $K_1 < K_2$.	➢ $K_1 < K < K_2$. ➢ Written K-strike Straddle + Long a Strangle with strike prices of K_1 and K_2.