Put/Call Parity

Call $(S_T - k)^+$

Put $(K - S_T)^+ = -(S_T - k)^-$

Buying a Call
Selling a Put $(S_T - k)^+ - (K - S_T)^+ = \begin{cases} S_T - K & S_T \geq K \\ -(K - S_T) & S_T < K \end{cases}$

$= S_T - K$

$\rightarrow T$

Put = Payment call $- S_T + K$

Time 0

$c(T-t, x)$ S_0 $\frac{K}{e^{r(T-t)}}$

$0 < K_1 < K_2$

European option pays $((S_T \wedge K_2) - K_1)^+$ $=$

0 $\quad S_T \le K_1$

$S_T - K_1 = (S_T - K_1)^+$ $\quad K_1 < S_T \le K_2$

$K_2 - K_1 = (K_2 - K_1)^+$ $\quad K_2 < S_T$