No.

Date

HW4 P4

if you buy call and put on same stock. you get

$|C-P| = |S(T) - K|$ payoff ($S(T)$ value of stock at T)

You get same payoff if you buy stock and borrow loan for K i.e

payoff: $S(T) - K$ (value in portfolio)

If these portfolio were s.t one is cheaper than the other you may short the ~~cheap~~ pricey portfolio and call the ~~pricey~~ cheap portfolio pocketing the difference with no liabilities at maturity.

This is risk free profit and not possible under arbitrage-free assumption

$\therefore$

$$C(t) - P(t) = S(t) - K \quad \forall t.$$

$\square$