Underlying:

S_0

$dS = S(\mu dt + \sigma dW_t)$, W_t - Wiener process

Base option:

payoff : $\max(S_T - K, 0)$, K - strike,
T - expiry

$V(t, S_t)$ - option price

Compound option:

payoff: $\max(V(T', S_{T'}) - K', 0)$,
K' - strike
T' - expiry, $T' < T$

$VC(t, S_t)$ - compound option price

Find: VC

Input parameters: $S_0, \mu, \sigma, T, K, T', K'$

Aux: change max $\to$ min