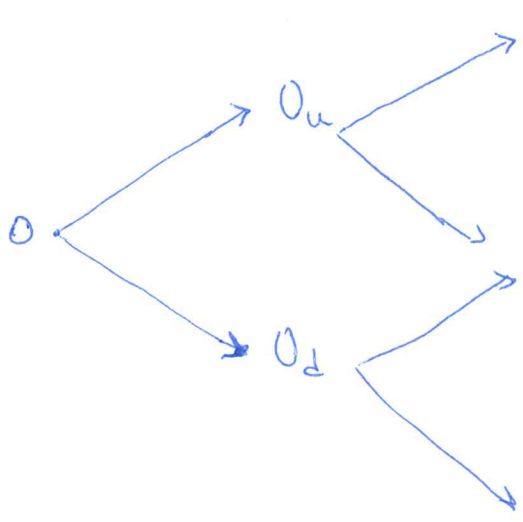
An American call option should not be exercided before the maturity if the stock does not pay dividends



$O_{uu} = \max(0, S_{uu} - X)$
$= \max(0, 625 - 375) = 250$

$O_{ud} = \max(0, 400 - 375) = 25$

$O_{dd} = \max(0, 256 - 375) = 0$

We saw that: $O_C^A \geq O_C^E \geq \max(0, S - PV(X))$
$\geq \max(0, S - X)$

Then we conclude that is always better to sell the option then exercise it (if we are not on the maturity)
In the maturity the option will expire

We can also see this in the tree

$O_u = \max(\text{dead}, \text{alive}) = \max(125, 149.53) = 149.53$

dead $= S_u - X = 500 - 375 = 125$

alive $= 149.53$

This values are calculate as we saw

$O_d = \max(320 - 375, 14.02) = 14.02$

$O = \max(400 - 375, 89.09) = 89.09$