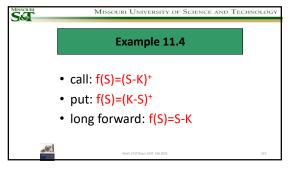
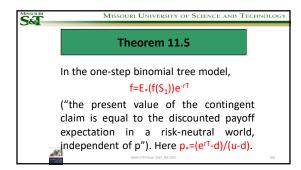


163 164 165

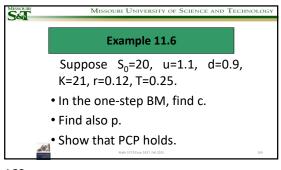
Definition 11.3

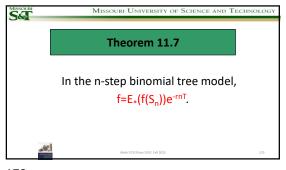
By a European derivative security or contingent claim with stock S as the underlying asset we mean a random variable of the form f(S(T)), where f is a given function, called the payoff.

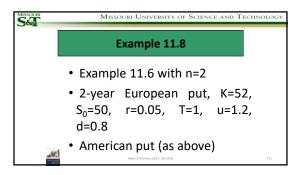




166 167 168





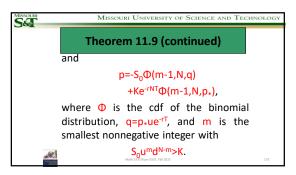


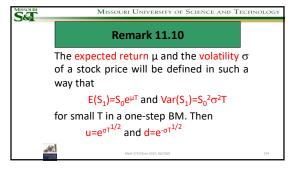
169 170 171

Theorem 11.9

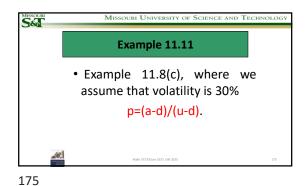
(Cox-Ross-Rubinstein formula)

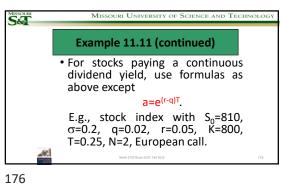
In the binomial model, the price of a European call and put with strike price K to be exercised after N time steps is $c=S_0[1-\Phi(m-1,N,q)]$ $-Ke^{-rNT}[1-\Phi(m-1,N,p_*)]$

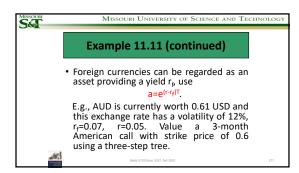




172 173 174







MISSOURI MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY Example 11.11 (continued) • Options on futures: Futures price should have an expected growth rate of zero. Use previous formulas with a=1.

177

178