University of Texas at Austin

Quiz #5

Real options.

Problem 5.1. (15 points) A video game production company is considering a pair of games: Shmoopie and Pinkipoo. When the production of two games is fully funded at time−0 the project has a net present value of 250,000.

The decision tree below shows the cash flows when the launch at the beginning of the Year 1 (i.e., at $t = 0$) is only partial with an option to provide different amounts of funding at the beginning of Year 2 (i.e., at $t = 1$) depending on how well the first game did.

This tree reflects two possible receptions of the two games at each information node (**G** = good, **B** = bad). The probability of the game being a success is given to be 3/4 and the probability of it being merely playable is 1/4.

Assume the interest rate is 0%.

Find the **initial** (i.e., at $t = 0$) value of the option to fund partially.