Homework-8

I purchased a stock in the Bombay Stock Exchange. Every week, its price either increases by 1% or decreases by 1% with probabilities 0.6 and 0.4. I have set a rule that the stock will be sold as soon as its price doubles (compared to my purchase price) or additional units will be purchased as soon as its price reduces to half the purchase price, whichever happens earlier. Determine the probability that the stock is sold. How long, on an average, would it take for either of the actions to happen?