Smith is in jail and has 1 dollar; he can get out on bail if he has 8 dollars. A guard agrees to make a series of bets with him. If Smith bets A dollars, he wins A dollars with probability .4 and loses A dollars with probability .6.

Find the probability that he wins 8 dollars before losing all of his money if

(a) he bets 1 dollar each time (timid strategy).
(b) he bets, each time, as much as possible but not more than necessary to bring his fortune up to 8 dollars (bold strategy).
(c) Which strategy gives Smith the better chance of getting out of jail?