Problem 1

Undergraduate Problem Solving Contest due September 16

In a particular dice game, a player scores the total of a series of rolls of a six sided die, provided a one is never rolled. The player is allowed to roll as many times as they like and stop whenever they like. What is the probability that they will score 6 or more points in a single turn, assuming the player stops after getting that many points (or are forced to stop by rolling a 1)?