Problem of the Week-7: Which Dice to Choose

You and a friend are going to play a dice game. One player will roll an 18-sided fair die (faces numbered 1 to 18) and the face up will be that player's score. The other player will take as their score the sum of three common 6-sided dice. If higher score wins, which would you rather roll — the one 18-sided die OR the three 6-sided dice? Naturally you must justify your choice with a valid probability argument.

As always, explain and justify your answer.

Posting Date 11/28/11. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 12/01/11.