4.1- Expected Value Review

Pg. 198 – 200 # 27, 41

Pg. 227 – 228 # 3 – 10, 12 (skip b), 15

Also the word problems below:

1. At a raffle, 5,000 tickets are sold at $6 each for three prizes valued at $2,800, $800, and $200. What is the expected value of one ticket?
2. A player throws a die. If a prime number is obtained, he gains to win an amount equal to the number rolled times 100 dollars, but if a prime number is not obtained, he loses an amount equal to the number rolled times 100 dollars. Calculate the probability distribution and the expected value of the described game.
3. Roger is in a casino that charges $6 per chance to roll an honest die. He will be paid, in dollars, the number of dots on the face of the die multiplied by 2. Find expected value of the game and explain the meaning in context. Does the game favor the casino or the player?
4. The first prize for a raffle is $5,000 (with a probability of 0.001) and the second prize is $2,000 (with a probability of 0.003). What is a fair price to pay for a single ticket in this raffle?

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