

Math 017 Sections 006 and 007
Spring 2007
Quiz 6

1. Two 6-sided dice are rolled. What is the probability the sum of the two numbers on the dice will be even and at least 8?

- a) $\frac{1}{4}$
- b) $\frac{31}{36}$
- c) 1
- d) $\frac{5}{36}$

2. Find the expected value of the random variable f in the following experiment: Five coins are tossed, and f takes the value 1 if there are exactly three heads, and takes the value 0 in any other case.

- a) $\frac{5}{16}$
- b) $\frac{1}{16}$
- c) $\frac{1}{32}$
- d) 1.5

3. Suppose you pay \$6.00 to roll a fair die 36 times with the understanding that you will get back \$1 for each 1 that you roll, nothing otherwise. What are your expected winnings?

- a) \$6.00
- b) -\$30.00
- c) \$12
- d) \$0

4. Suppose you pay \$1.50 to play the following game: you roll two fair dice, and receive $\$x^2$ dollars if there are x even numbers amongst the result. What are your expected winnings?
- a) \$1.50
 - b) \$3
 - c) \$0.50
 - d) \$0