Homework 9 Chapters 15 and 16 (Problems 1 to 5)

Due on October 31

Math 125 *Kovitz* Fall 2025

Problem 3 can be tricky; be careful what is being asked. Problem 2 is the key problem.

1. A die will be rolled 6 times. Find the chance of getting—

   (a) no fours.

   (b) exactly one four.

   (c) Exactly two fours.

   (d) Exactly three fours.

2. A die is rolled 10 times. What is the chance of getting exactly four fours?

   (A) 1.3% (B) 5.43% (C) 13.66% (D) 24.6% (E) 40%

3. A coin is tossed 10 times. Find the chance of getting 7 heads and 3 tails.

   Be careful. This question is about the result of getting exactly 7 heads and exactly 3 tails. It asks to find the chance of this result happening.

4. True or false: If a coin is tossed 500 times, it is not likely that the number of heads will be exactly 250, but it is likely that the percentage of heads will be exactly 50%. Explain.

5. A computer selects two-digit numbers from 00 to 99, independently and at random. A gambler chooses a 2-digit number and bets a dollar on it. If his number comes up, he receives \$80, including the return of his dollar. Thus he wins \$79. If his number does not come up, he loses the dollar.

   The gambler plays this game 70 times.

   His net gain is like the sum of ____ draws made at random from the box _____.

   Fill in the blanks: the first blank with a number and the second blank with tickets in the box, each showing a value, labelled with the number of tickets of that kind. (See Example 1 on pages 283 and 284. The net gain is based on winnings, not on return.)