

Supplementary Practice for Quiz 2

(The quiz will be on Friday, April 4.)

Math 125 *Kovitz* Spring 2025

1. A box contains six tickets, numbered 1 to 6. Four tickets are drawn at random from the box, without replacement.

True or False:

The chance that at least one of the four tickets drawn has the number 2 on it is

$$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{2}{3}.$$

2. A box contains six tickets, numbered 1 to 6. Four tickets are drawn at random from the box, with replacement.

True or False:

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$$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{2}{3}.$$

3. A fair die is rolled five times.

True or False:

The chance that at least one of the five rolls results in the side with two spots on top is

$$\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \frac{5}{6}.$$

For problems 4 to 6:

A fair die is rolled four times.

4. Find the chance that at least one of the four numbers rolled was the side with three spots.

(A) 1.54% (B) 9.645% (C) 38.6% (D) 48% (E) 52%

5. Find the chance that at exactly one of the four numbers rolled was the side with three spots.

(A) 1.54% (B) 9.645% (C) 38.6% (D) 48% (E) 52%

6. Find the chance that at exactly two of the four numbers rolled were the side with three spots.

(A) 1.93% (B) 9.645% (C) 11.574% (D) 33.33% (E) 38.6%