

I pledge my honor that I have neither given nor received aid on this exam.

NAME

SSN (last 4 digits)

Show all work (attach work pages). Write on one side of page only.
Write answers in space provided. Staple in upper left-hand corner.

Consider three identical-looking dice. Two of the dice are ordinary fair dice (six equally-likely faces, numbered 1,2,...,6), but the third die is "loaded" (the face that ordinarily has a 1 has a 6 instead; that is, the loaded die has two 6's, on opposite faces). Fran and Ron each choose a die at random, and the remaining die is discarded.

Suppose that Fran and Ron roll their dice simultaneously.

1. Find the probability that Fran rolls a 6. 1) _____

2. Find the probability that Ron rolls a 6. 2) _____

3. Find the probability that Fran rolls a 6 and Ron rolls a 6. 3) _____

4. Find the probability that Fran rolls a 6 if it is known that Ron rolled a 6. 4) _____

Now suppose that Fran rolls her die again (that is, she rolls the same die twice).

5. Find the probability that Fran's second roll is a 6. 5) _____

6. Find the probability that Fran's first roll is a 6 and her second roll also is a 6. 6) _____