

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 a pair of identical-looking dice. One of the dice is ordinary (six equally-likely faces, numbered 1,2,3,4,5,6), but the other die ("loaded") has its 1 replaced by a 6, so it has six equally-likely faces, numbered 6,2,3,4,5,6). One of the dice is chosen at random and tossed 5 times.

1. Find the probability that the first toss produces a 1. 1) \_\_\_\_\_
2. Find the probability that the first toss produces a 6. 2) \_\_\_\_\_
3. Find the probability that the second toss produces a 6. 3) \_\_\_\_\_
4. Find the probability that the first two tosses produce two 6's. 4) \_\_\_\_\_
5. Find the probability that the fifth toss produces a 6 if the first toss produced a 6. 5) \_\_\_\_\_
6. Find the probability that the first toss produced a 6 if the fifth toss produced a 6. 6) \_\_\_\_\_
7. Find the probability that the sum of the first two tosses is 8. 7) \_\_\_\_\_
8. If the loaded die was chosen, find the probability that it produced two or less 6's among the five tosses. 8) \_\_\_\_\_