

## Quiz 3

Crawford

Name: \_\_\_\_\_

Books and notes (in any form) are not allowed. *Show all your work.* Good Luck!

1. (2 pts) Complete the table so that you get a probability distribution that makes sense:

| $x$ | $P(x)$ |
|-----|--------|
| 1   | 0.11   |
| 2   | 0.28   |
| 3   | 0.35   |
| 4   |        |

2. (6 pts) A large company conducted an internal study to determine how many interviews an individual had with the company before a decision was made. The variable  $x$  represents the number of interviews and the results are given in the following probability distribution.

| (number of<br>times watched)<br>$x$ | $P(x)$ |
|-------------------------------------|--------|
| 1                                   | .13    |
| 2                                   | .46    |
| 3                                   | .35    |
| 4                                   | .03    |
| 5                                   | .03    |

- (a). Find the mean and standard deviation.

- (b). Is it considered unusually high to have 4 interviews before a decision is made? Justify your answer.

**3.** (7 pts) Suppose you are participating in a Casino Night Fundraiser. The slot machine is configured so that there is a  $1/150$  probability of winning the jackpot on any individual trial. Suppose a player claimed to win the jackpot twice out of 10 times playing.

(a). Find the probability of winning the jackpot twice in 10 tries.

(b). Find the probability of winning the jackpot at least twice in 10 tries.

(c). Based on our 0.05 rule, is it unusual for a person to never hit the jackpot in 10 tries?