$\qquad$
Score $\qquad$

Show all work to receive full credit. Supply explanations when necessary.

1. (2 points) If the probability of the event $A$ is $37 \%$, then what is the probability of $A^{\prime}$ ?
2. (8 points) A letter is selected at random from the first box and placed into the second box. Then a letter is selected at random from the second box.

| O | O | O | O | X |
| :--- | :--- | :--- | :--- | :--- |


| O | O | O | X | X | X |
| :--- | :--- | :--- | :--- | :--- | :--- |

(a) Sketch the complete tree diagram for this experiment. Include the probabilities of each path.
(b) What is the probability of selecting at least one X ?
(c) What is the probability of selecting O from the first box or O from the second box?

