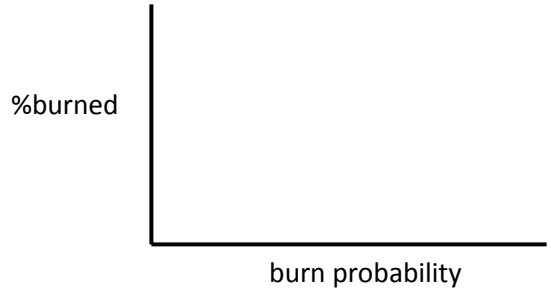
Forest Fire Data Analysis Handout

Making a Prediction

How do you think the %burned will vary as the probability changes? Sketch a prediction on the graph to the right.



Will 50% of the forest burn if the probability of the fire spreading to a neighboring tree is set to 0.5?

Will we all get the same result when we each set the probability to 0.5 and run the model?

Running the Experiment

You will be assigned a probability between 0.0 and 1.0. Be sure to change your probability to the value you were assigned, then be sure to always ignite the center tree, burn the forest 10 times and average your results.

Probability = _____ Average of 10 trials = _____

Percent of trees burned

Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Trial 6	Trial 7	Trial 8	Trial 9	Trial 10

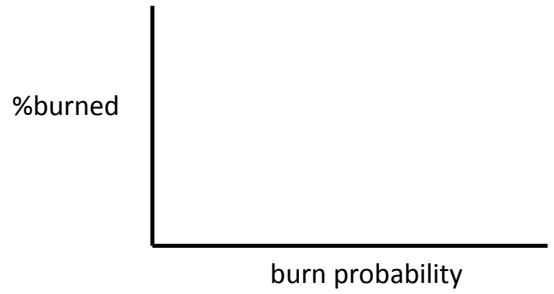
For your ten trials, did the burn pattern look the same for each trial? Describe.

Now share the data with the class and create a table of the class data.

Average percent of trees burned given different probabilities

P = 0.05	P = 0.10	P = 0.15	P = 0.20	P = 0.25
P = 0.30	P = 0.35	P = 0.40	P = 0.45	P = 0.50
P = 0.55	P = 0.60	P = 0.65	P = 0.70	P = 0.75
P = 0.80	P = 0.85	P = 0.90	P = 0.95	P = 1.00

Sketch the data on the axes provided.



Did the graph of the actual data match your prediction? Explain.