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| NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_ | **Statistics and Probability** |
| 8-3 Confidence Intervals | **DATE: Monday, January 11, 2016** |

Warmup:

For Ian’s final project, he stands in the rotunda by the cafeteria and goes up to every third person and asks them if they download music illegally.

What type of survey is this?

What are some issues with him generalizing his results for the entire student body?

Explain to Ian how he could design this survey in a better way.

Lets say he redoes the survey your way and 120 students respond with 42 saying yes. Create a 95% confidence interval for the true proportion of students at Deering who download music illegally?

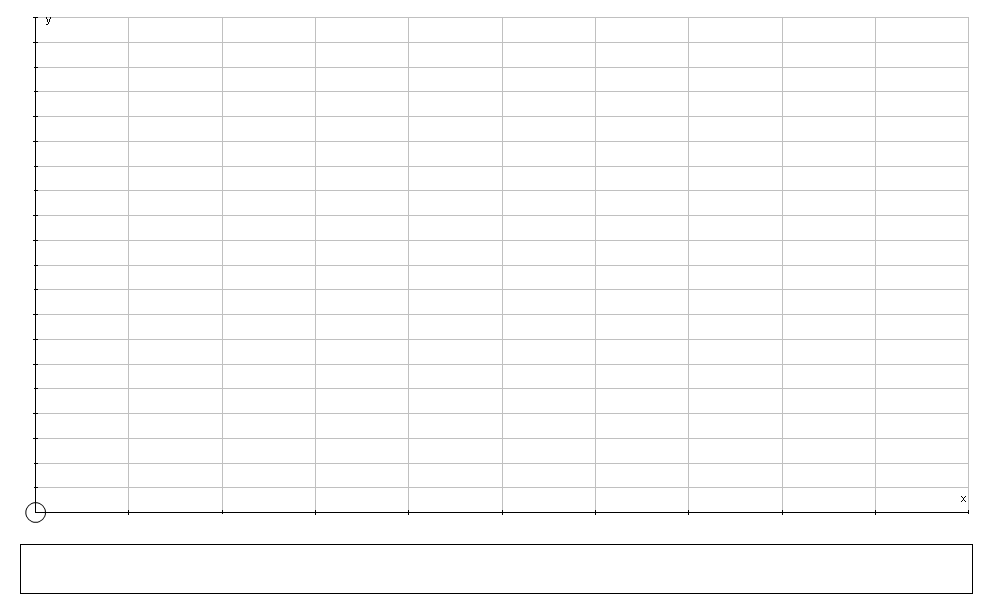
I hate blue MandMs and every time I buy M and Ms, it seems like I get way more of them.

Take a bag with a neighbor and count how many of each.

Fill in the table:

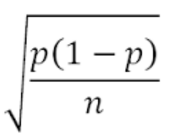
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| Color | Frequency | Percent |
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Make a bar graph and a pie graph below



Create a 95% confidence interval for the percent of blue that M&M makes.

Lets assume the figure I gave is right. What should the standard deviation of samples your sample size be?



Using the online calculator, what is the chance that we would have gotten an answer as far away or more from the true mean?

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| You are told that the percent of students at Deering who are on honor role is 44%. For a final project, Hua conducts a survey of 120 students and found that only 30% are on honor role. If the true stat is 44%, what is the chance that you would have gotten an answer 30% or farther off just by chance?  Does Hua have reason (at .05 signicance level) to doubt Deering’s admin’s statement? | Donald Trump says he is getting 45% of voters in Maine. The Press Herald thinks it is much less. They conduct a survey of 358 people around the state and find that 122 people said they support him. What is the chance if Donald Trump’s figure is right, that the Press Herald would have gotten a figure as low as that or lower just by chance?  Does the Press Herald have reason (at .05 significance level) to doubt his statement? |