

# Projects in the Classroom

Neal Brand

Professor  
Department of Mathematics  
University of North Texas

April 7, 2018

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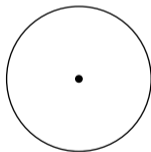
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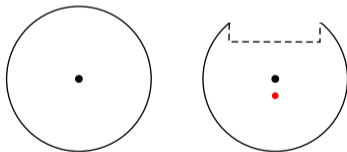
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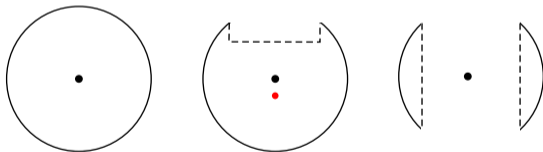
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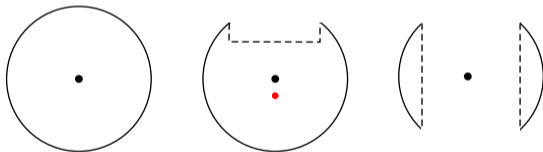
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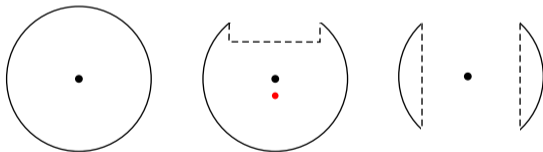
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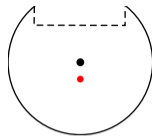
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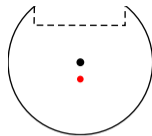


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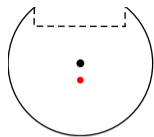


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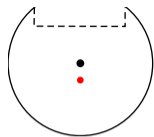
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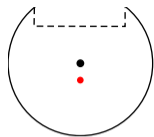
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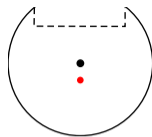
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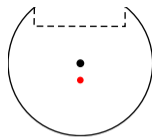
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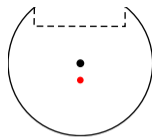
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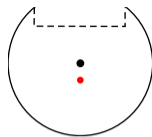
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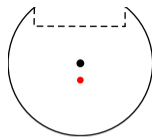


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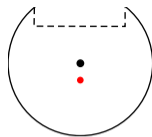


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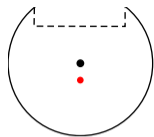
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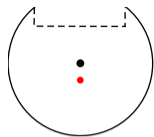
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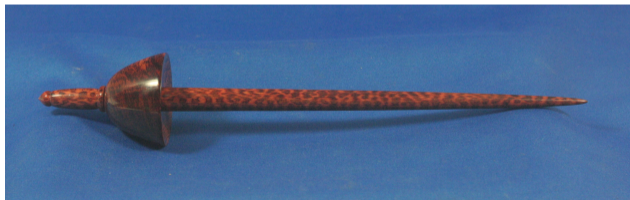
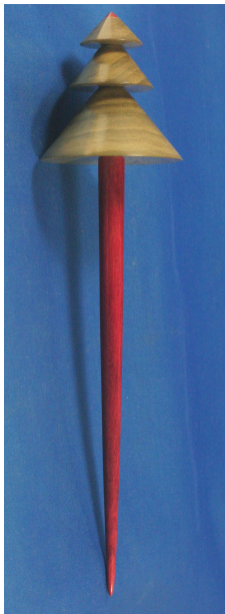
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  - ▶ For what ratios of concentration of bacteria to concentration of algae is the probability at least 0.95 that among 20 samples, at least one will be axenic?

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  - ▶ Given the concentration of bacteria and the concentration of algae, how large should a sample be in order to maximize the probability of at least one algae and no bacteria in the sample?
  - ▶ For what ratios of concentration of bacteria to concentration of algae is the probability at least 0.95 that among 20 samples, at least one will be axenic?

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[math.unt.edu/~brand](http://math.unt.edu/~brand)