

# Distributions

Sally Rodgers  
Acme  
2007-Nov-16 : 11:42:55

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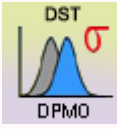

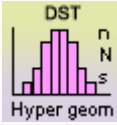
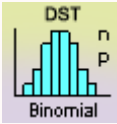
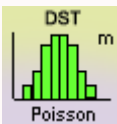
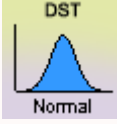
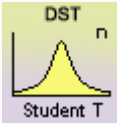
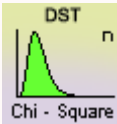
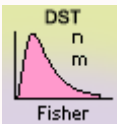
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## Project Introduction

### Project Details

<b>Project Name</b>	DST
<b>Description</b>	Distributions
<b>Objective</b>	To demonstrate the availability of different probability distributions within iCT-M.
<b>Abstract</b>	The knowledge of which distribution applies in a given situation is an important requisite for proper probabilistic determinations.
<b>Project Leader</b>	Sally Rodgers
<b>Commencement Date</b>	07-Mar-2007
<b>Project Completion Date</b>	
<b>Completion Date</b>	
<b>Status</b>	Not Completed

## Project Flow

Stages	Objective	Activities	Deliverables	Applet
→	Calculate DPMO	DPMO	Calculates the Defect Per Million Opportunities	
		DPMO Conversion	Converts between the Defects level and the Sigma level	
≈	Discrete Probability Distributions	Hypergeometric	This discrete probability distribution describes the number of successes in a sequence of $n$ draws from a finite population without replacement	
		Binomial	This discrete probability distribution describes the number of successes in a sequence of $n$ independent yes/no experiments, each with probability success $p$ .	
		Poisson	This discrete probability distribution describes the probability of a number of events occurring in a fixed period of time if these events occur with a known average rate, and are independent of the time	
∞	Continuous Probability Distributions	Normal	The normal distribution, is a continuous probability distribution of the same general form, differing in their location and scale parameters: the mean and standard deviation	
		Student	The t-distribution is a probability distribution that arises in the problem of estimating the mean of a normally distributed population when the sample size is small	
		Chi-square	The chi-square distribution is one of the most widely used theoretical probability distributions in inferential statistics	
		Fisher	The F-distribution is a continuous probability distribution arising as the ratio of two chi-squared variates	

## Summary

# Distributions

Sally Rodgers  
Acme  
2007-Nov-16 : 11:33:31

## Applet Introduction

### Applet Details

<b>Applet Title</b>	
<b>Description</b>	
<b>Objective</b>	
<b>Abstract</b>	
<b>Team Leader</b>	Sally Rodgers
<b>Commencement Date</b>	24-Mar-2007
<b>Expected Completion Date</b>	
<b>Completion Date</b>	
<b>Status</b>	Not Completed
<b>Team Name</b>	
<b>Team Members</b>	<i>No Team Members are selected.</i>

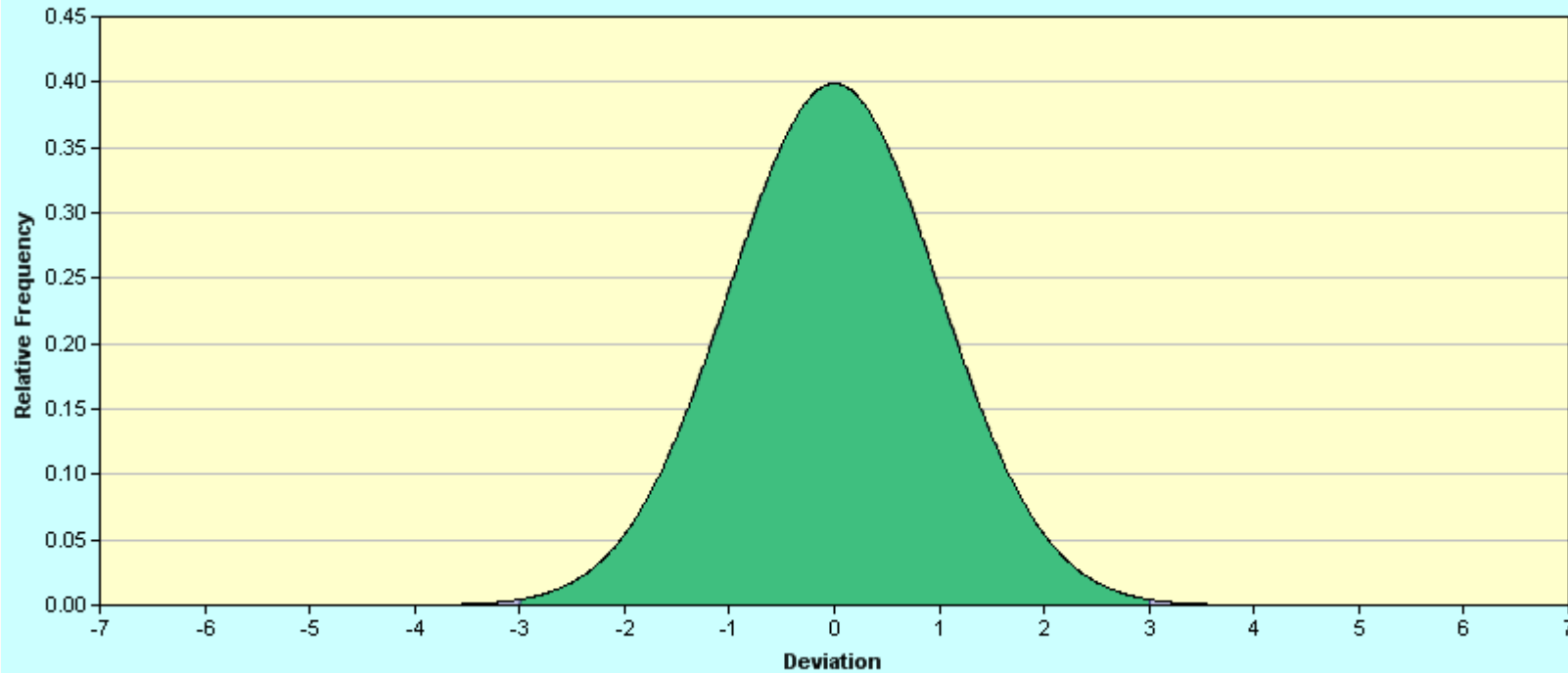
# Normal Distribution

## Interval

$Z_L: -3$

$Z_R: 3$

Normal Distribution Interval



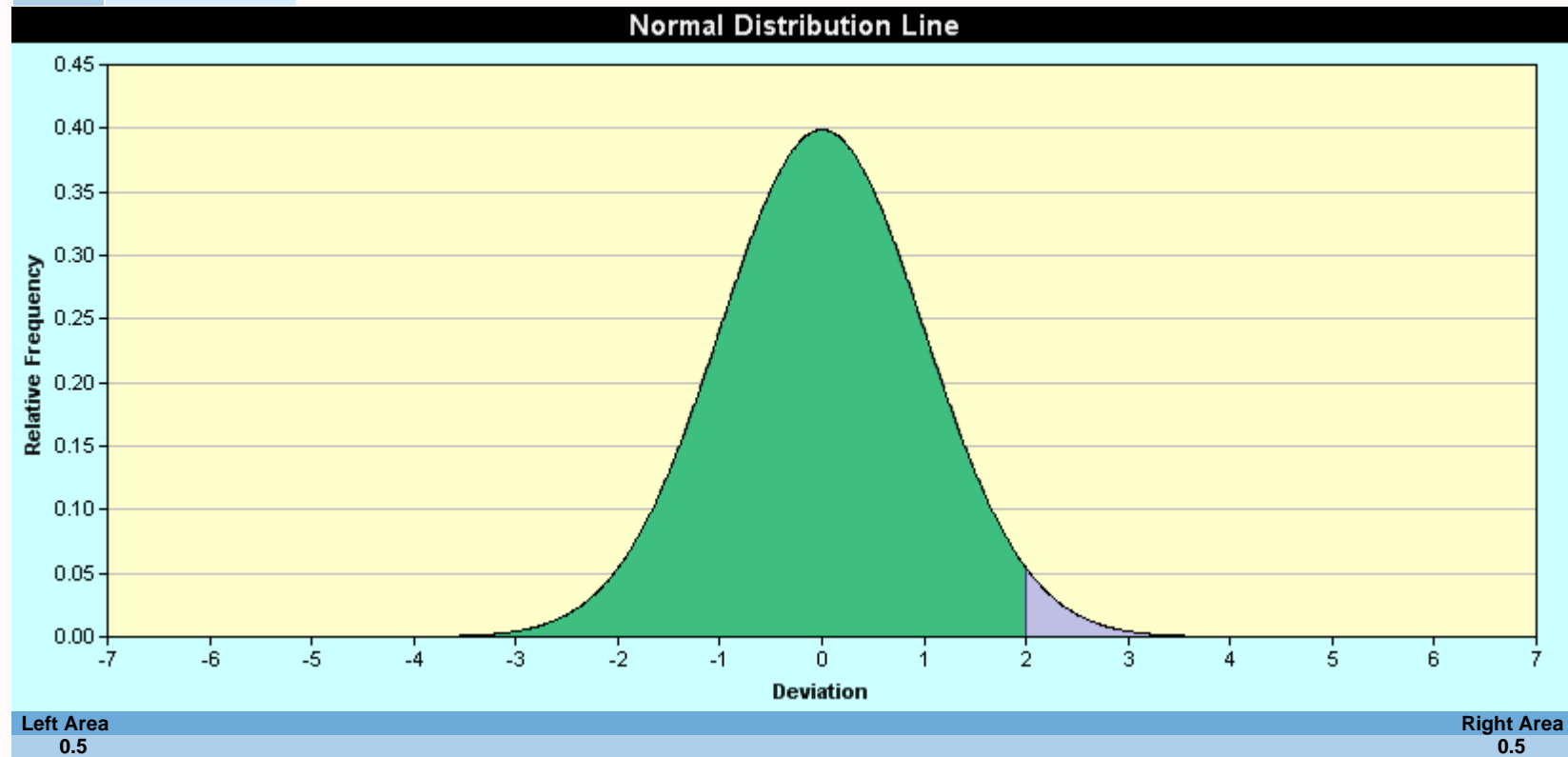
Left Area	Internal Area	External Area	Right Area
1	0	1	0



# Normal Distribution

## Line

$Z_R: 2$



## Summary

Comments

Observations

Lesson Learnt

Summary

Next Action

# Distributions

Sally Rodgers  
Acme  
2007-Nov-16 : 11:35:01

## Applet Introduction

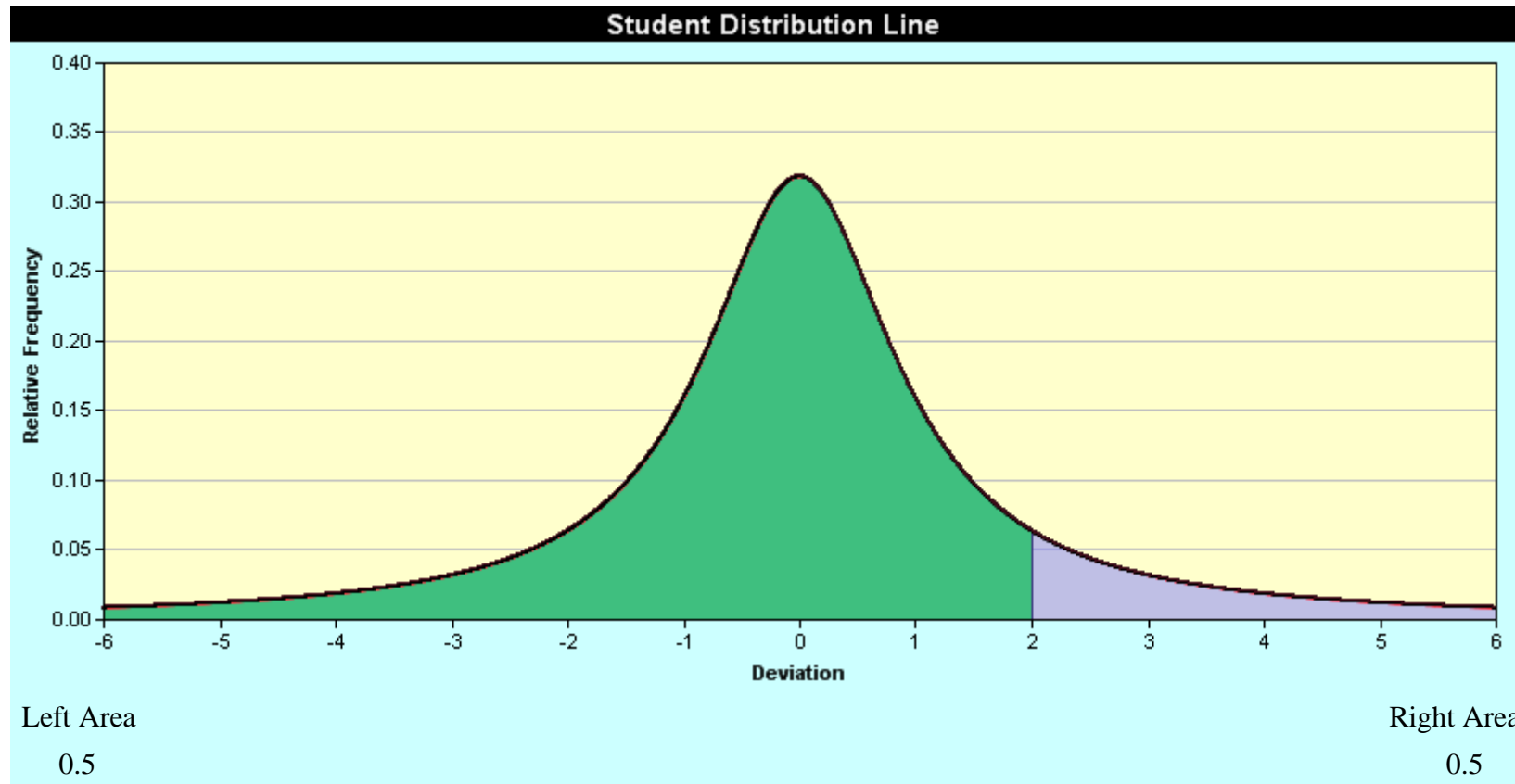
### Applet Details

<b>Applet Title</b>	
<b>Description</b>	
<b>Objective</b>	
<b>Abstract</b>	
<b>Team Leader</b>	Sally Rodgers
<b>Commencement Date</b>	24-Mar-2007
<b>Expected Completion Date</b>	
<b>Completion Date</b>	
<b>Status</b>	Not Completed
<b>Team Name</b>	
<b>Team Members</b>	<i>No Team Members are selected.</i>

Students Distribution

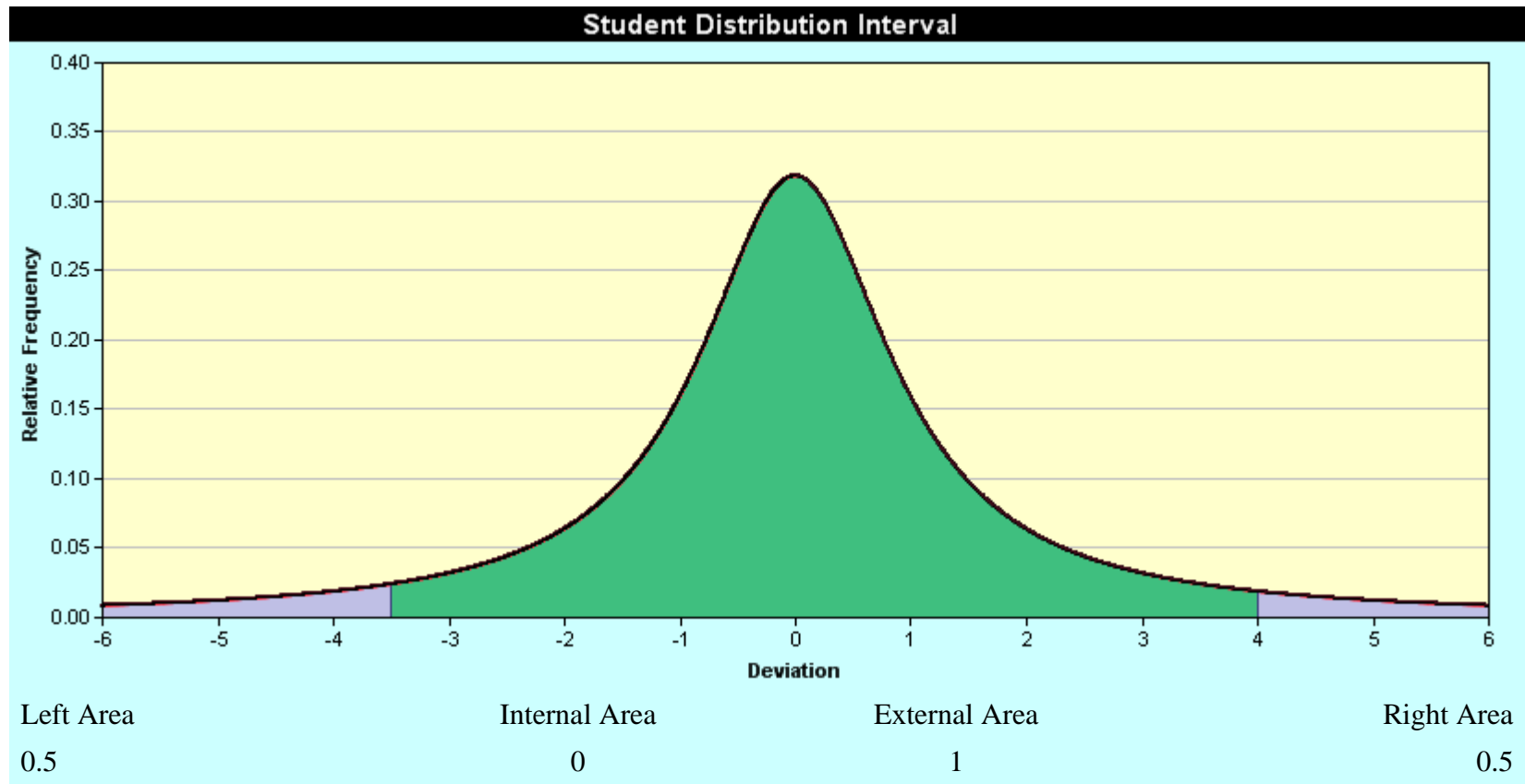
# Line

Z: 2



Students Distribution

# Interval



## Summary

# Distributions

Sally Rodgers  
Acme  
2007-Nov-16 : 11:36:31



## Applet Introduction

### Applet Details

Applet Title	
Description	
Objective	
Abstract	
Team Leader	Sally Rodgers
Commencement Date	24-Mar-2007
Expected Completion Date	
Completion Date	
Status	Not Completed
Team Name	
Team Members	<i>No Team Members are selected.</i>

# ChiSq Distribution



Accuracy:  Good  Better  Best +.0  
.00    .00  
+.0

Go

Step: 0.05

Z<sub>L</sub>: << 3.7 >>

dof: << 10 >>

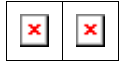
Step: 0.05

Z<sub>R</sub>: << 12.15 >>

graph

Left Area	Internal Area	External Area	Right Area
0.040133	0.684724	0.315276	0.275143

## ChiSq Distribution

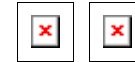
Accuracy:  Good  Better  Best

Go

dof: &lt;&lt; 5 &gt;&gt;



graph



Step: 0.05

 $Z_R$ : << 2.05 >>

Left Area

0.157816

Right Area

0.842184

Summary

Comments

Observations

Less on Learnt

Summary

Next Action

# Distribution testing

Bawani Ho  
Acme  
2007-Mar-05 : 09:57:34

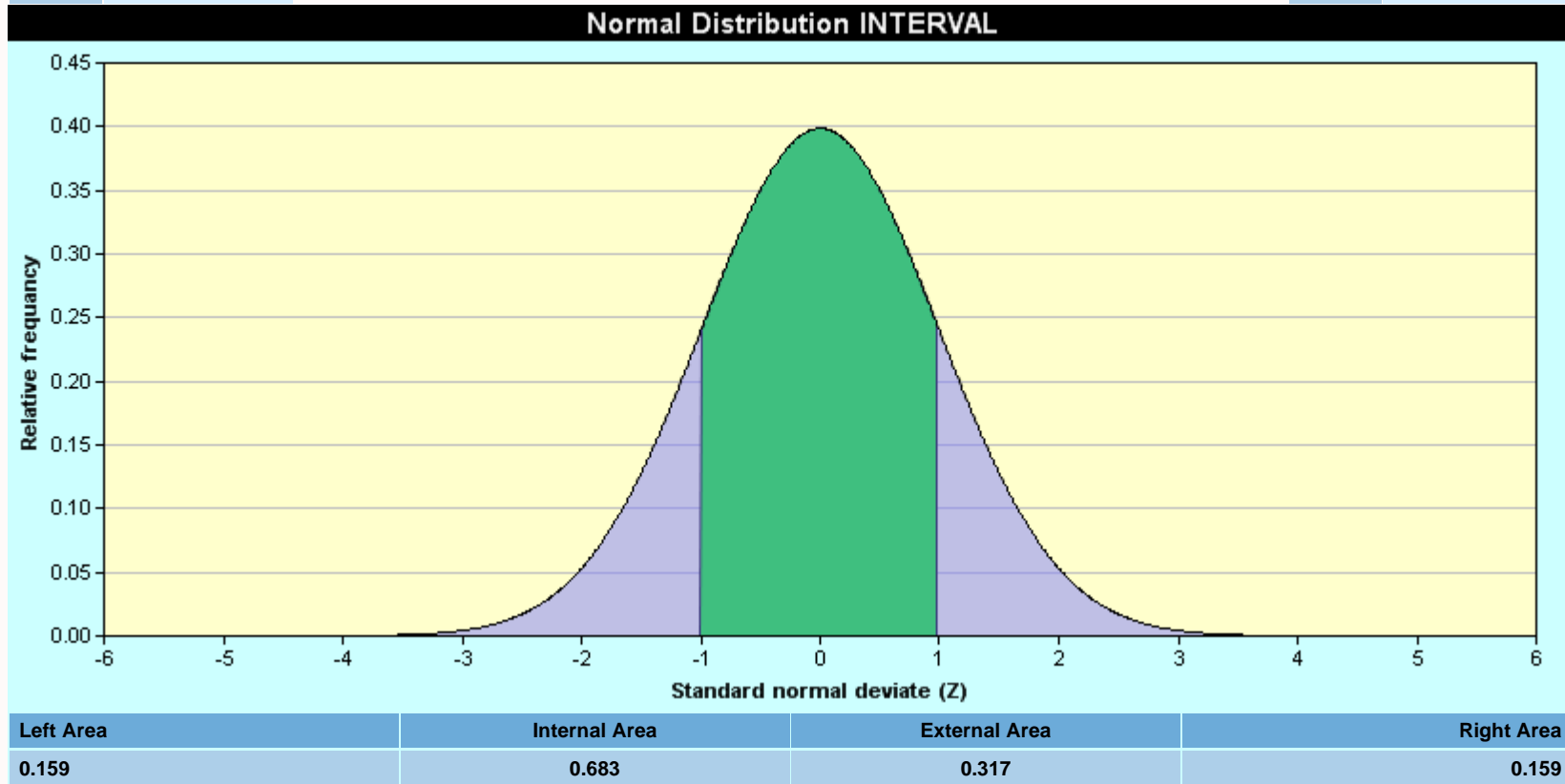
**Applet Details**

<b>Applet Title</b>	
<b>Description</b>	
<b>Objective</b>	
<b>Abstract</b>	
<b>Team Leader</b>	Bawani Ho
<b>Commencement Date</b>	26-Aug-2006
<b>Expected Completion Date</b>	
<b>Completion Date</b>	
<b>Status</b>	Not Completed
<b>Team Name</b>	
<b>Team Members</b>	<i>No Team Members are selected.</i>

### Interval

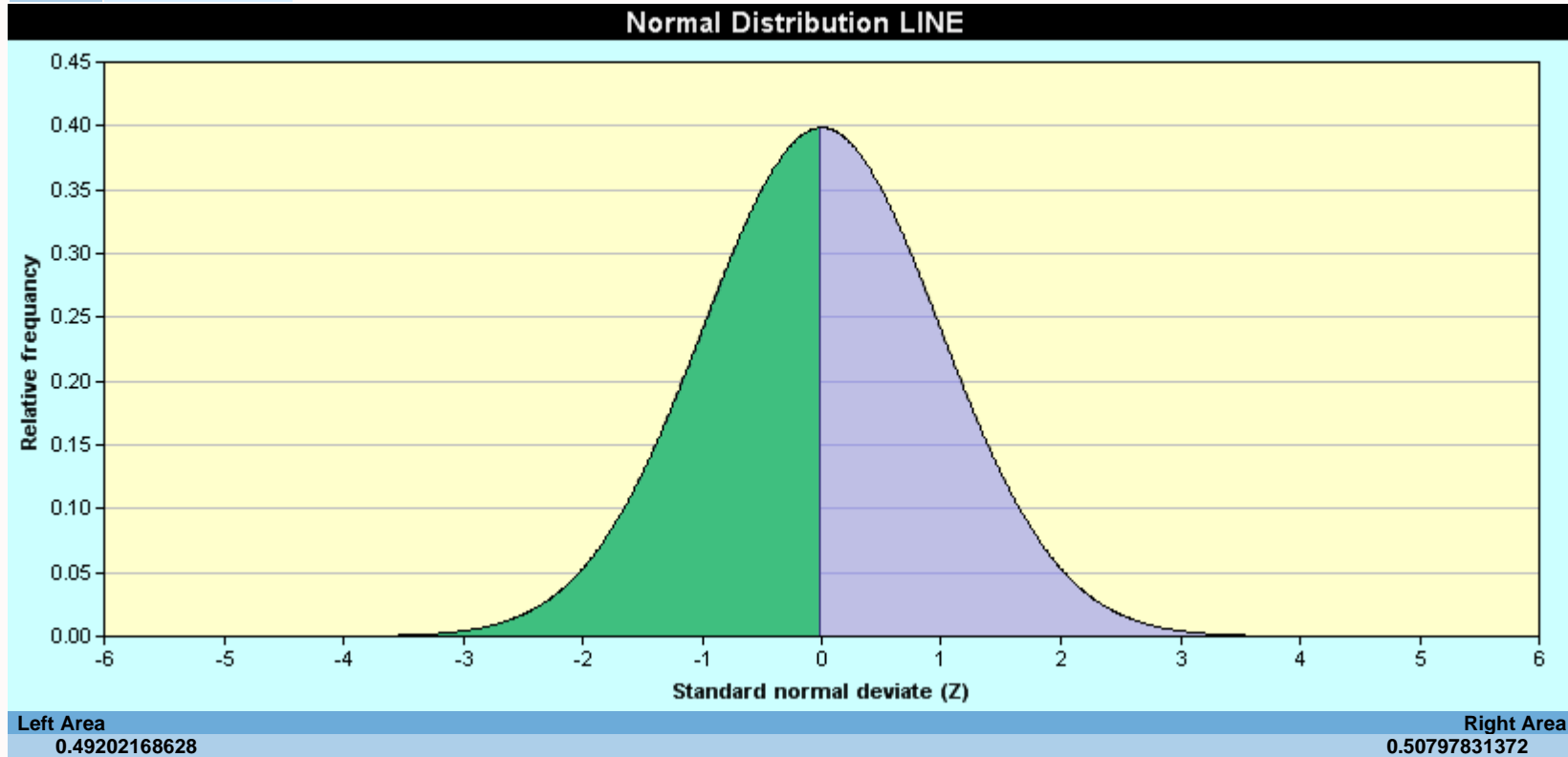
$Z_L$

$Z_R$



### Line

$Z_R$





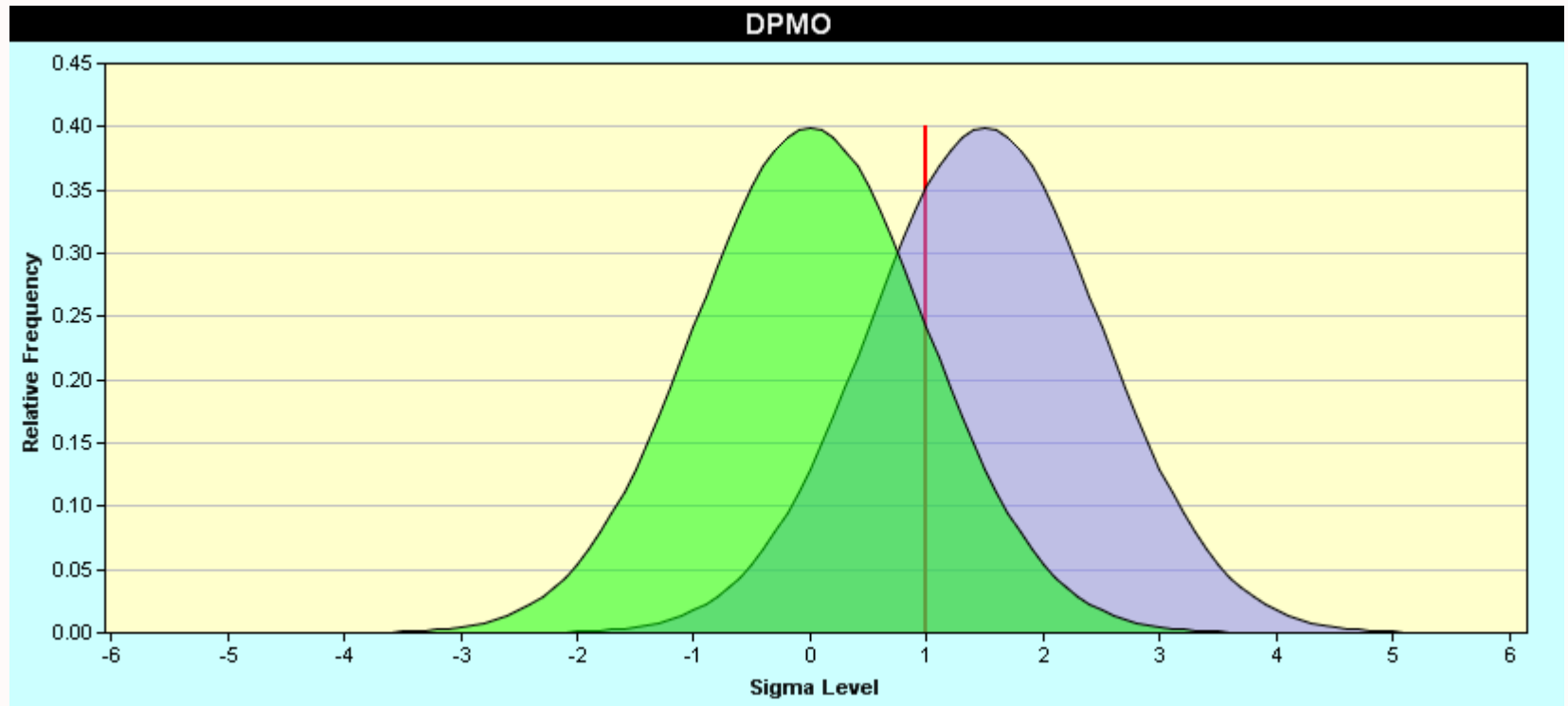
# Distributions

Bawani Thambu  
Acme  
2007-Apr-10 : 17:18:20

**Applet Details**

<b>Applet Title</b>	
<b>Description</b>	
<b>Objective</b>	
<b>Abstract</b>	
<b>Team Leader</b>	Bawani Thambu
<b>Commencement Date</b>	22-Mar-2007
<b>Expected Completion Date</b>	
<b>Completion Date</b>	
<b>Status</b>	Not Completed
<b>Team Name</b>	
<b>Team Members</b>	<i>No Team Members are selected.</i>

Sigma	1
Defects	936999



Sigma Range:  $-6 < \text{sigma} < 6$

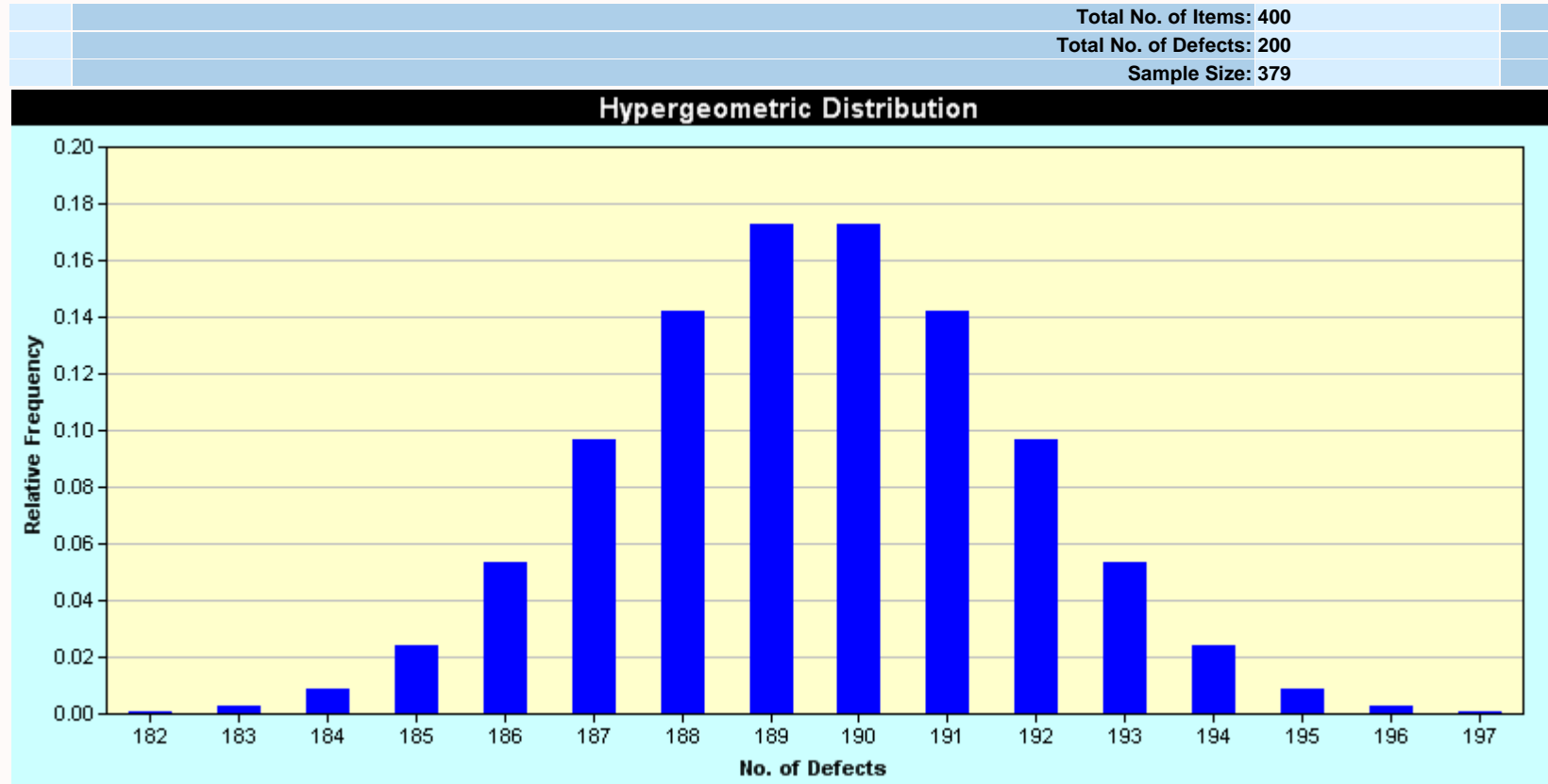


# Distributions

Bawani Thambu  
Acme  
2007-Apr-10 : 17:29:38

**Applet Details**

<b>Applet Title</b>	
<b>Description</b>	
<b>Objective</b>	
<b>Abstract</b>	
<b>Team Leader</b>	Bawani Thambu
<b>Commencement Date</b>	22-Mar-2007
<b>Expected Completion Date</b>	
<b>Completion Date</b>	
<b>Status</b>	Not Completed
<b>Team Name</b>	
<b>Team Members</b>	<i>No Team Members are selected.</i>







# Distributions

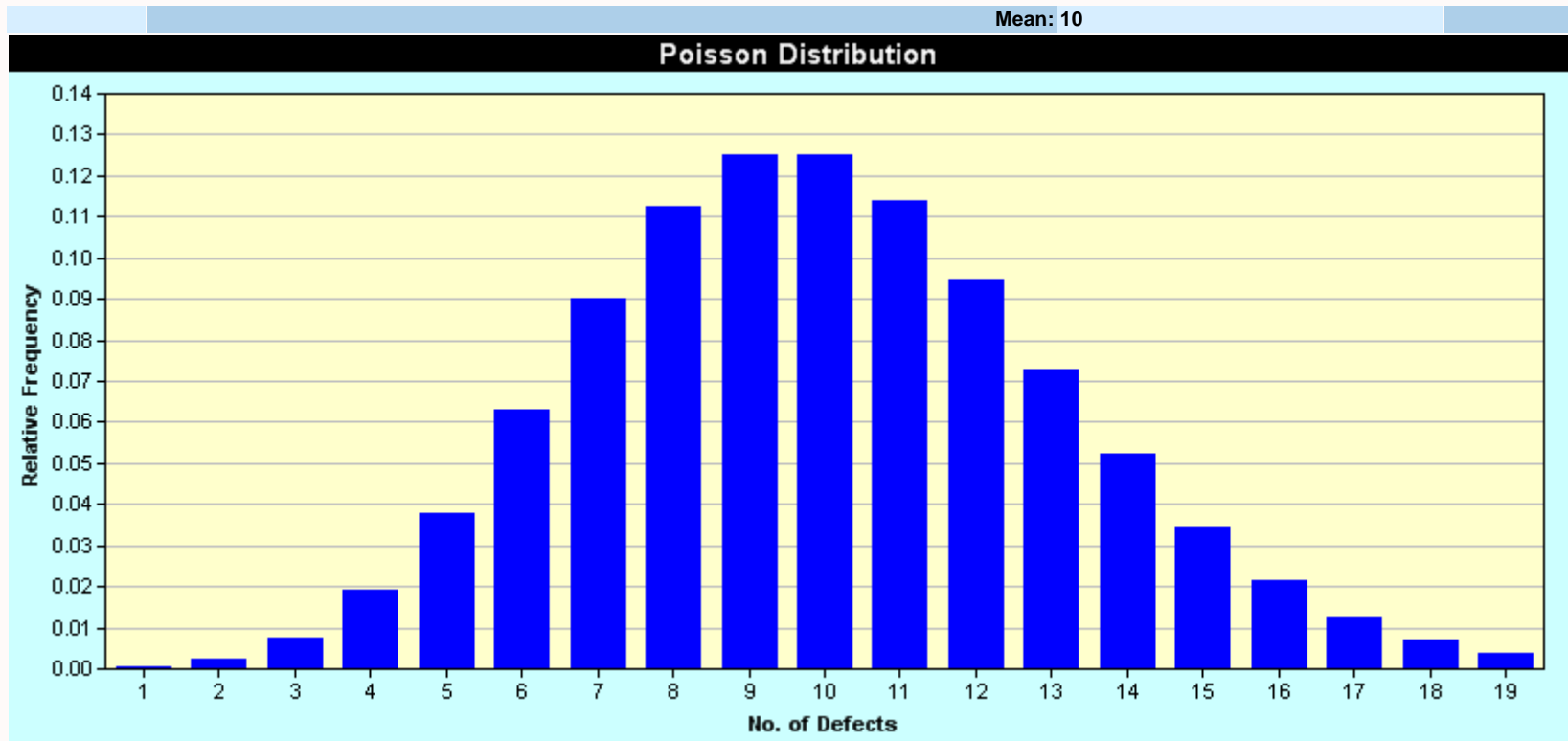
Sally Rodgers  
Acme  
2007-Nov-16 : 11:30:34

## Applet Introduction

### Applet Details

<b>Applet Title</b>	
<b>Description</b>	
<b>Objective</b>	
<b>Abstract</b>	
<b>Team Leader</b>	Sally Rodgers
<b>Commencement Date</b>	12-Apr-2007
<b>Expected Completion Date</b>	
<b>Completion Date</b>	
<b>Status</b>	Not Completed
<b>Team Name</b>	
<b>Team Members</b>	<i>No Team Members are selected.</i>

# Poisson Distribution



## Summary

# Distributions

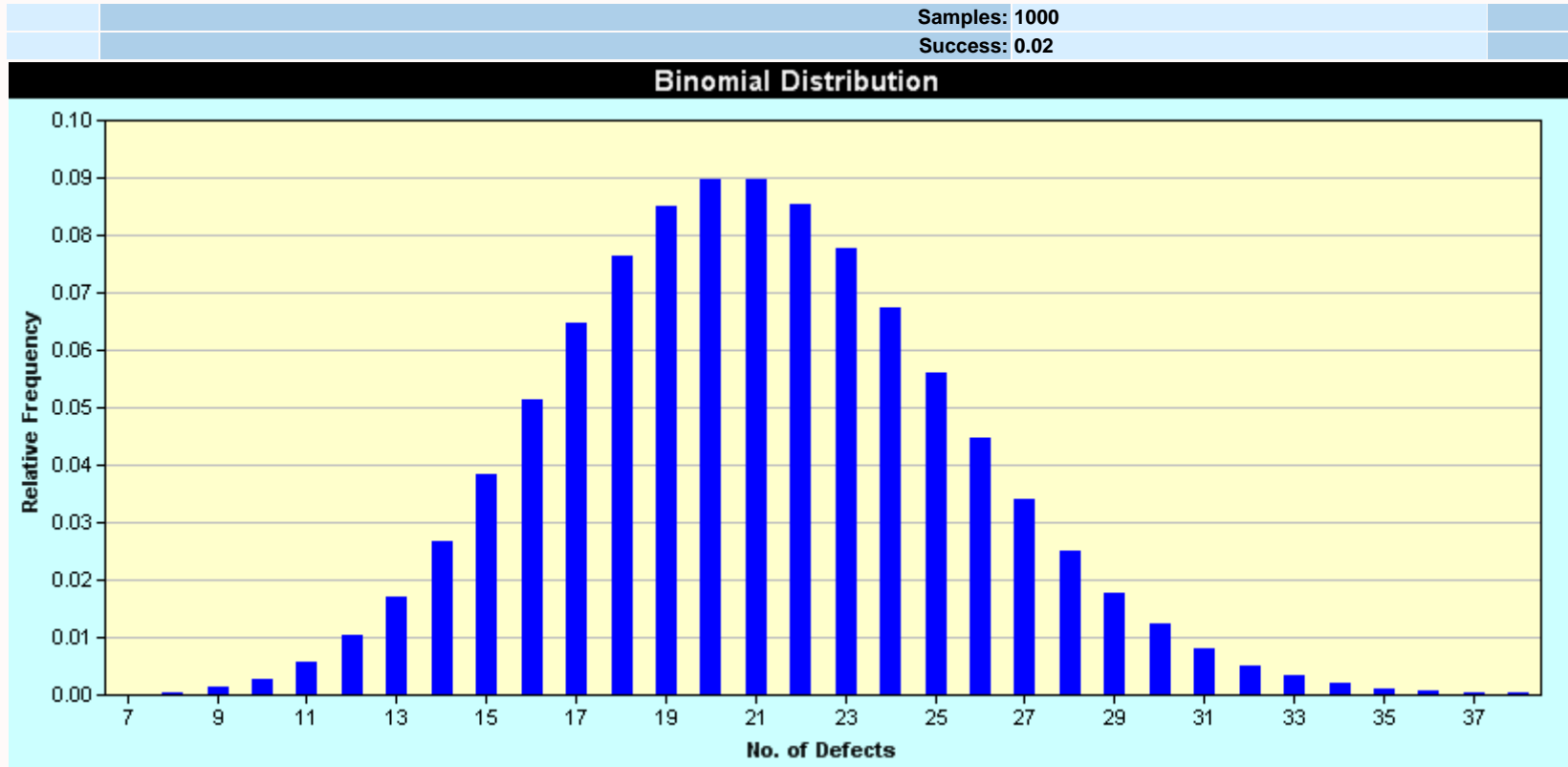
Sally Rodgers  
Acme  
2007-Nov-16 : 11:28:10

## Applet Introduction

### Applet Details

<b>Applet Title</b>	
<b>Description</b>	
<b>Objective</b>	
<b>Abstract</b>	
<b>Team Leader</b>	Sally Rodgers
<b>Commencement Date</b>	22-Mar-2007
<b>Expected Completion Date</b>	
<b>Completion Date</b>	
<b>Status</b>	Not Completed
<b>Team Name</b>	
<b>Team Members</b>	<i>No Team Members are selected.</i>

# Binomial Distribution



## Summary

Comments

Observations

Lesson Learnt

Summary

Next Action