



The Eyeballing Game – Statistical Analysis

Name: _____ Date: _____

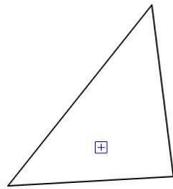
The purpose of this activity is to analyze the distribution of scores earned playing a game designed to test the spatial and estimating skills of the player.

Activity

1. Go to: <http://www.woodgears.ca/eyeball>
2. Play the game 5 times in a row. Each time you play record your score (the score represents the average error of your guesses). The game will also record your scores in the bottom right side of the screen. Use the table below to record your scores and then transfer them to the class google doc so all of the data is available for the class.

The eyeballing game

Mark the point equidistant to the edges



Your inaccuracy by category:	
Parallelogram	3.2 5.4
Midpoint	12.1 6.4
Bisect angle	0.1 0.4
Triangle center	7.0
Circle center	0.0
Right angle	5.2
Convergence	4.0

Average error: 4.38 (lower is better)
Time taken: 545.7

Best of last 500 score and time: [more](#)

0.91	258 s	Hawkeye
1.05	283 s	Hawkeye
1.20	250 s	Go etter bñnam oppdrag
1.21	170 s	ced
1.27	314 s	NT is on rampage! ±
1.62	61 s	Popeye says:
1.75	79 s	Extra Virgin Olive Oil
1.82	192 s	
1.96	222 s	
2.01	200 s	

Best on this computer

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3. After all of the data is in the spread sheet: Using appropriate technology.
 - a) Plot a histogram (set an appropriate bin width)
 - b) Calculate the mean, median, range, variance, standard deviation and percent spread.
 - c) Copy and paste the histogram to a google document. Describe the shape of the graph (is it normal, bimodal, left skewed, or right skewed). In a text box record the measures from part b).
 - d) From your data/histogram state the range of values that 68%, 95% and 99.7% of your data lies.
 - e) Calculate the percentage of students in your class that scored lower than 15.
 - f) Calculate the percentage of students in your class that scored greater than 5.
 - g) Calculate the percentage of students in your class that scored less than 5.
 - h) Calculate the percentage of students in your class that scored greater than 10 and less than 15.
 - i) Calculate your average for the 5 trials you did. Calculate the z-score for this value and also calculate what percentile you are in (percentage of people that got lower than you – which recall is better).
 - j) Make the document you are working on look good; include titles, your name, a brief introduction to the activity, a link to the website, your histogram and results.