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**2013 AP Statistics Exam**

40 Multiple Choice: 90 minutes Calculators allowed/encouraged

6 free response: 90 minutes Formula sheet provided

 5 short answer 4 point rubric

 1 investigative task

Data:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Score | % |  | Question | Mean | sd |
| 5 | 12.8 |  | 1 | 2.27 | 1.10 |
| 4 | 20.3 |  | 2 | 0.93 | 0.97 |
| 3 | 24.8 |  | 3 | 1.61 | 1.05 |
| 2 | 18.8 |  | 4 | 1.70 | 1.57 |
| 1 | 23.4 |  | 5 | 0.57 | 0.72 |
|  |  |  | 6 | 2.14 | 1.04 |

**Resources and Activities**

#1: Inference template

#2: Stratification activity at NCSSM (2000)-online resource (http://courses.ncssm.edu/math/Stat\_Inst/links\_to\_all\_stats\_institutes.htm)

#4: Froot Loop data

#5 Yawning applet and What-if?

#6 Trend video-online resource

**Froot Loops for Chis-square goodness of fit**

Materials

1 large box of Froot Loops per class

cups or bowls to distribute cereal

The Plan

Students are given a small bowlful of cereal. They tally color distribution of their data.

Color distribution is entered into a list.

Students are asked if the color distribution is uniform. They enter the expected distribution of uniform color distribution in a second list.

Problems with running multiple proportion tests are discussed. (insert Green Jelly Beans xkcd)

Chi-square goodness of fit test explained, run and written on inference template.

**Large-run simulations**

1998 #6 Pearl of unusual sizes

2009 #6 Simulating skewness

2010 #6 Simulated ranks

[www.rossmanchance.com](http://www.rossmanchance.com)

Yawning study (Mythbusters)

**Trends**

Trend and variation (TeddyTVNorge)

<http://www.youtube.com/watch?v=e0vj-0imOLw>