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**ASSIGN  
BUSTER**

## Abstract

This project seeks to analyze the correlation between the number of students per state with the grade level. A simple linear regression equation and attributed graph will be applied to indicate this status.

## Introduction

With the increased population of students and attributed practices to each student in various states in the US, the work of assessing and grading these students in the class performance, statistical instruments are necessary to achieve efficiency of certain measures of dispersion. Attaining efficient measures of dispersion is a guarantee of the overall efficiency of the data. In this case, a correlation between the total population of a state and the grade level of learners will be examined (Kameo, 32). A linear graph will be used to investigate this relationship

## Description of data

The data for this project was retrieved from [http://www.cde.ca.gov/ds/ . ,](http://www.cde.ca.gov/ds/) and it covers 18 states and learning grades from K to grade 12

## Report Total

0; 1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; Year

Alameda

; 01; 18655; 17591; 17755; 17553; 17223; 17248; 16626; 16448; 16685; 18; 16499; 16608; 1658

**9; 16990; 193; 222681; 167; 2013-14**

Alpine ; 02; 12; 15; 10; 11; 11; 10; 5; 5; 4; 0; 0; 1; 4; 2; 0; 90; 0; 2013-14

Amador

; 03; 294; 278; 311; 325; 299; 330; 334; 290; 328; 0; 338; 324; 336; 378; 0;  
4165; 0; 2013-14

**Butte**

; 04; 2548; 2360; 2406; 2276; 2316; 2387; 2234; 2381; 2287; 0; 2385; 2460;  
2400; 2588; 41; 310

**69; 0; 2013-14**

Calaveras

; 05; 452; 359; 400; 405; 372; 394; 421; 448; 473; 27; 522; 527; 519; 500;  
18; 5837; 0; 2013-14

**Colusa**

; 06; 411; 383; 381; 333; 355; 318; 338; 326; 335; 0; 353; 367; 315; 303; 0;  
4518; 0; 2013-14

**Contra Costa**

; 07; 13719; 12851; 13412; 12997; 13333; 13292; 13274; 13149; 13219; 0;  
13516; 13104; 13281  
; 13572; 301; 173020; 81; 2013-14

**Del Norte**

; 08; 337; 320; 364; 321; 288; 291; 291; 290; 335; 0; 285; 304; 333; 385; 0;  
4144; 0; 2013-14

## **El Dorado**

; 09; 2120; 1933; 1952; 1953; 2024; 1977; 2050; 2087; 2068; 1; 2279; 2269;  
2223; 2301; 0; 2723

## **7; 39; 2013-14**

Fresno

; 10; 17704; 15771; 15954; 15438; 15406; 14957; 14680; 14666; 14522; 1;  
14863; 14886; 14281  
; 15103; 228; 198460; 4; 2013-14

## **Glenn**

; 11; 483; 360; 474; 448; 366; 413; 404; 435; 434; 0; 431; 430; 430; 421; 15;  
5544; 0; 2013-14

## **Humboldt**

; 12; 1666; 1396; 1477; 1432; 1346; 1345; 1253; 1395; 1224; 66; 1427;  
1374; 1296; 1296; 61; 18

## **054; 0; 2013-14**

Imperial

; 13; 2940; 2741; 2807; 2934; 2708; 2793; 2751; 2855; 2829; 0; 3195; 2934;  
2893; 2543; 53; 369

## **76; 0; 2013-14**

Inyo

; 14; 213; 203; 231; 212; 214; 202; 181; 186; 198; 0; 684; 720; 783; 1053; 0;  
5080; 0; 2013-14

## Kern

; 15; 16291; 13779; 14681; 14101; 13705; 13430; 13469; 13355; 13321; 24;  
14139; 13037; 1287

## **0; 13412; 66; 179680; 0; 2013-14**

Kings

; 16; 2643; 2220; 2313; 2273; 2142; 2129; 2097; 2076; 2103; 14; 2189;  
2156; 2097; 2171; 5; 286

## **28; 0; 2013-14**

Lake

; 17; 800; 668; 700; 724; 644; 703; 654; 662; 706; 0; 685; 702; 750; 618; 0;  
9016; 0; 2013-14

## Lassen

; 18; 372; 318; 340; 322; 340; 305; 325; 334; 319; 0; 369; 400; 398; 399; 0;  
4541; 0; 2013-14

## Los Angeles

; 19; 123935; 115731; 118322; 115599; 114908; 114826; 113619; 115656;  
118308; 190; 129959  
; 126350; 121305; 123249; 747; 1552704; 814; 2013-14

## Madera

; 20; 2710; 2388; 2581; 2350; 2426; 2301; 2346; 2324; 2255; 0; 2284; 2276;  
2289; 2331; 0; 3086

## **1; 0; 2013-14**

Marin

; 21; 2947; 2707; 2692; 2646; 2730; 2685; 2512; 2427; 2364; 0; 2333; 2305;  
2185; 2218; 42; 327

## **93; 0; 2013-14**

Mariposa

; 22; 164; 130; 153; 133; 128; 143; 144; 146; 127; 0; 145; 156; 145; 175; 6;  
1895; 0; 2013-14

## **Mendocino**

; 23; 1099; 979; 983; 1057; 943; 941; 993; 982; 982; 0; 1025; 1071; 1006;  
1080; 7; 13148; 0; 201

## **3-14**

Merced

; 24; 4781; 4372; 4560; 4259; 4189; 4360; 4236; 4371; 4266; 0; 4234; 4194;  
4232; 4304; 103; 56

## **461; 2; 2013-14**

Modoc

; 25; 137; 101; 115; 103; 117; 114; 110; 106; 104; 0; 119; 109; 101; 118; 0;  
1454; 2; 2013-14

## **Mono**

; 26; 141; 135; 154; 134; 136; 134; 114; 152; 111; 0; 102; 117; 136; 440; 0;  
2006; 0; 2013-14

## Consider further description of the data

Report: state Enrollment

Gender: female and male

Type: Normal

Description

Consider the graphical description of this data in a histogram below. The graphs are deduced from the excel

The scatter Diagram

Descriptive Statistical Method

Since our data is one-dimensional, we use a simple linear regression equation to relate the two items; the students and the grades (Water Management in Reservoirs, 21). The mode of the equation is indicated as follows

$$Y = a + bx$$

### Where a and b are constants, which depends on the changes of Y and X

In this case, the Y -axis is represented by the student population and the X-axis, is represented by the grade level. In the regression, we assume that, he is normally distributed with the mean 0 and variance  $\alpha^2$ . In the data analysis, we need to check the validity of this assumption. In addition, we need to check the level of correlation between the number of students and the grade level enrolled (Gerald, 4). In estimating the values of the a and b, the least square method will be used. After considering the results of the regression analysis, we settle at the final regression equation as follows

$Y = 1.0210 + 6.564 X$ . This is the equation is relevant to the data discussed

in this study since the correlation between the two variables is on the positive trend (David, 32).

## Work Cited

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