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Line of Best Fit

A Line of Best fit is the line that comes closest to all points in the data set or scatter plot.

The table shows populations & numbers of U.S. Representatives for several states in the year 2000.

State	Population (Millions)	Representatives
AL	4.5	7
AK	0.6	1
AZ	5.1	8
AR	2.7	4
CA	33.9	53
CO	4.3	7

$a = 1.56$
 $b = 0.02$
 $* y = 1.56x + 0.02$
 $r = 0.999$
Positive Strong Correlation

We are looking for a slope (a), y-intercept (b) & correlation coefficient (r) using the calculator.

Steps: ① Data

② Type X-values (L1) & y-values (L2)

③ 2nd Data (Stat) → 4) LinReg $ax + b$

④ 1) a = slope 2) b = y-int 4) r = correlation coefficient

⑤ Write the equation $y = ax + b$ & describe correlation.