California Electrical Examinations
Statistical Overview 2017

Background: PSI began administering the following California Electrical examinations in 2009: General Electrician, Residential Electrician, Non-Residential Lighting Technician, Fire-Life Safety Technician, and Voice Data Video Technician. PSI currently administers both English and Spanish versions of these examinations.

Statistical Review of the Examinations: PSI recently conducted a statistical review of the California Electrical examinations from January 1, 2017 to December 31, 2017. The statistical results are compiled in the table below.

Exam	Annual # of Attempts	Test Length	First Time Pass Rate	Repeat Pass Rate	Average P-Value	Average PBIS	Average Item N
General Electrician	5048	100	35.73%	41.06%	.641	.296	1218.11
General Electrician – SPANISH	18	100	0.00%	25%	.460	.104	7.70
Residential Electrician	335	80	22.97%	33.33%	.595	.275	74.94
Residential Electrician - SPANISH	9	80	0.00%	0.00%	.430	.189	4.85
Non-Residential Lighting Technician	69	50	44.19%	38.46%	.657	.265	42.11
Non-Residential Lighting Technician - Spanish	6	50	0.00%	0.00%	.446	.130	3.07
Fire-Life Safety Technician	411	50	45.92%	46.43%	.680	.279	117.31
Fire-Life Safety Technician – Spanish	1	50	NA	NA	NA	NA	NA
Voice Data Video Technician	251	50	56.76%	50%	.679	.260	79.76
Voice Data Video Technician - SPANISH	0	50	N/A	N/A	N/A	N/A	N/A

The statistics listed in each of the table's columns is described below:

Annual # of Attempts: The approximate number of candidates (both first time candidates and repeat candidates) taking the exam each year.
Test Length: The number of items in the test.
First Time Pass Rate: The passing percentage of those candidates taking the test for the first time.
Repeat Pass Rate: The passing percentage of those candidates taking the test for the second (or more) time.
Average P-Value: The average number of candidates that get each test question correct
Average PBIS: The biserial correlation is an indication of how well each item differentiates between the good candidates and the poorer candidates. These correlations can range from -1.00 (negatively correlated) to 0 (no correlation) to +1.00 (positive correlation). For exams with a high enough sample size (over 30), an average PBIS over 0.20 is acceptable, and an average PBIS over 0.30 is considered to be good.
Average Item N: The average number of candidates that have taken each item. Statistics generated from sample sizes below 30 are typically regarded as being unstable.
N/A: Not enough candidate data to calculate meaningful averages