A Complete Analyis of the Algebra I Regents Exam

John Russell

2023-01-20

| Question.Number | Standard | Domain | Percentage.Correct |
| --- | --- | --- | --- |
| 2 | F-LE | Linear, Quadratic, and Exponential Models | 0.75 |
| 19 | F-BF | Building Functions | 0.36 |
| 3 | F-IF | Interpreting Functions | 0.53 |
| 21 | S-ID | Interpreting Categorical and Quantitative Data | 0.40 |
| 21 | F-IF | Interpreting Functions | 0.24 |
| 16 | S-ID | Interpreting Categorical and Quantitative Data | 0.33 |
| 2 | S-ID | Interpreting Categorical and Quantitative Data | 0.74 |
| 1 | A-SSE | Seeing Structure in Expressions | 0.50 |
| 7 | A-APR | Arithmetic with Polynomials and Rational Expressions | 0.45 |
| 13 | A-CED | Creating Equations | 0.54 |

| Question.Number | Standard | Domain | Percentage.Correct |
| --- | --- | --- | --- |
| 2 | F-LE | Linear, Quadratic, and Exponential Models | 0.75 |
| 19 | F-BF | Building Functions | 0.36 |
| 3 | F-IF | Interpreting Functions | 0.53 |
| 21 | S-ID | Interpreting Categorical and Quantitative Data | 0.40 |
| 21 | F-IF | Interpreting Functions | 0.24 |
| 16 | S-ID | Interpreting Categorical and Quantitative Data | 0.33 |
| 2 | S-ID | Interpreting Categorical and Quantitative Data | 0.74 |
| 1 | A-SSE | Seeing Structure in Expressions | 0.50 |
| 7 | A-APR | Arithmetic with Polynomials and Rational Expressions | 0.45 |
| 13 | A-CED | Creating Equations | 0.54 |

# Classification

### To classify the data by difficulty levels, we will use a common technique called “Jenks Natural Breaks Classification.” This method seeks to minimize the average deviation from the class mean while maximizing the deviation from the means of the other groups. The result is the arrangement

```