

**2022 STAAR
Score Distributions and Statistics
by Content Area and Grade**

Glossary

This glossary provides definitions for the statistical terms that appear in the tables and graphs in this section (“STAAR 2022 Score Distributions and Statistics by Content Area and Grade”) of Appendix B. Definitions of statistical terms and concepts in the other sections are given in [Chapter 3](#) or [Chapter 4](#).

Descriptive Statistics

Mean The mean is a measure of central tendency. It is the average score for the assessment. It is computed by summing the scores of all students and dividing the sum by the total number of students (N).

Median The median is another measure of central tendency. It is the score at the middle of the frequency distribution for the assessment. It is computed by finding the score at which there are the same number of scores above as there are below.

Mode The mode is another measure of central tendency. It is the most frequently obtained score for the assessment. It is determined by computing the frequency distribution and finding the score point with the highest frequency (n-count).

Range The range is a measure of statistical dispersion (variability or spread). It is the difference between the lowest and highest scores obtained by students on the assessment. It is computed by subtracting the lowest score from the highest score.

Interquartile Range The interquartile range is another measure of statistical dispersion (variability or spread). It is the difference between the 1st and 3rd quartiles (or 25th and 75th percentiles) of the score distribution for the assessment. It is computed by subtracting the score at the 1st quartile (the point that splits the lowest 25 percent of the scores) from the score at the 3rd quartile (the point that splits the highest 25 percent of the scores).

Standard Deviation (SD) The standard deviation is another measure of statistical dispersion (variability or spread). It is an indicator of the degree of score variation around the mean. It is computed using the following formula:

$$SD = \sqrt{\frac{\sum_{i=1}^N (X_i - \bar{X})^2}{N - 1}},$$

where X_i is the score for student i , \bar{X} is the mean score and N is the total number of students who took the assessment.

Variance The variance is another measure of statistical dispersion (variability or spread) around the mean. It is computed as the square of the standard deviation (SD).

Skewness The skewness is an indicator of the shape of the score distribution. It measures the extent to which the score distribution “leans” to one side of the mean. A positive skewness indicates that the score distribution leans below the mean. A negative skewness indicates that the score distribution leans above the mean. A skewness of zero indicates that the score distribution is symmetric around the mean. It is computed using the following formula:

$$Skewness = \frac{N}{(N-1)(N-2)} \sum_{i=1}^N \left(\frac{X_i - \bar{X}}{S_X} \right)^3,$$

where X_i is the score for student i , \bar{X} is the mean score, S_X is the standard deviation (SD) and N is the total number of students who took the assessment.

Kurtosis The kurtosis is another indicator of the shape of the score distribution. It measures the “peakedness” of the score distribution. A positive kurtosis is referred to as *leptokurtic*, meaning that the distribution has a more acute peak around the mean and fatter tails. A negative kurtosis is called *platykurtic*, meaning the distribution has a lower, wider peak around the mean and thinner tails. It is computed using the following formula:

$$Kurtosis = \frac{N(N+1)}{(N-1)(N-2)(N-3)} \sum_{i=1}^N \left(\frac{X_i - \bar{X}}{S_X} \right)^4 - \frac{3(N-1)^2}{(N-2)(N-3)},$$

where X_i is the score for student i , \bar{X} is the mean score, S_X is the standard deviation (SD) and N is the total number of students who took the assessment.

Frequency Distributions

Frequency (Freq) This is the number of students who obtained the particular score point on the assessment.

Cumulative Frequency (CumFreq) This is the number of students who obtained a score that is less than or equal to the particular score point on the assessment.

Percentage (Pct) This is the percentage of students who obtained the particular score point on the assessment. It is computed as: $Pct = Freq \div N \times 100$.

Cumulative Percentage (CumPct) This is the percentage of students who obtained a score that is less than or equal to the particular score point on the assessment. It is computed as: $CumPct = CumFreq \div N \times 100$.

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**Table B.7.1. Spring 2022 STAAR English Grades 3–8 Assessments
Scale Score Descriptive Statistics**

Subject		N	Mean	Median	Mode	Range	Interquartile Range	SD	Variance	Skewness	Kurtosis
Grade 3	Mathematics	364,660	1440.37	1439	1525	1139	231	160.50	25759.02	0.32	0.13
Grade 4	Mathematics	370,858	1545.82	1530	1645	1141	208	156.32	24434.59	0.39	0.28
Grade 5	Mathematics	376,805	1612.67	1606	1699	1131	199	155.01	24028.75	0.51	0.47
Grade 6	Mathematics	386,734	1618.66	1601	1520	1133	179	137.17	18816.33	0.73	0.90
Grade 7	Mathematics	350,423	1626.45	1602	1522	1147	184	138.07	19062.13	0.92	1.34
Grade 8	Mathematics	356,847	1671.14	1652	1640	1168	183	148.18	21956.03	0.74	1.06
Grade 3	Reading	350,396	1462.18	1468	1588	1136	210	159.22	25352.39	0.10	-0.01
Grade 4	Reading	359,606	1541.91	1550	1633	1146	199	144.85	20981.39	-0.06	0.26
Grade 5	Reading	369,516	1606.32	1607	1742	1155	208	160.55	25776.79	0.11	0.10
Grade 6	Reading	393,512	1589.69	1587	1687	1155	204	144.96	21013.79	0.14	0.13
Grade 7	Reading	410,385	1683.66	1695	1797	1174	223	153.73	23632.30	0.08	0.15
Grade 8	Reading	411,168	1710.49	1723	1798	1183	182	144.35	20837.04	-0.14	0.32
Grade 5	Science	376,309	3803.75	3795	4263	4336	754	552.48	305235.80	0.39	0.31
Grade 8	Science	409,328	3934.00	3905	4174	5402	829	640.34	410033.48	0.47	0.91
Grade 8	Social Studies	414,914	3727.14	3661	3372	4944	760	550.29	302818.10	0.67	0.99

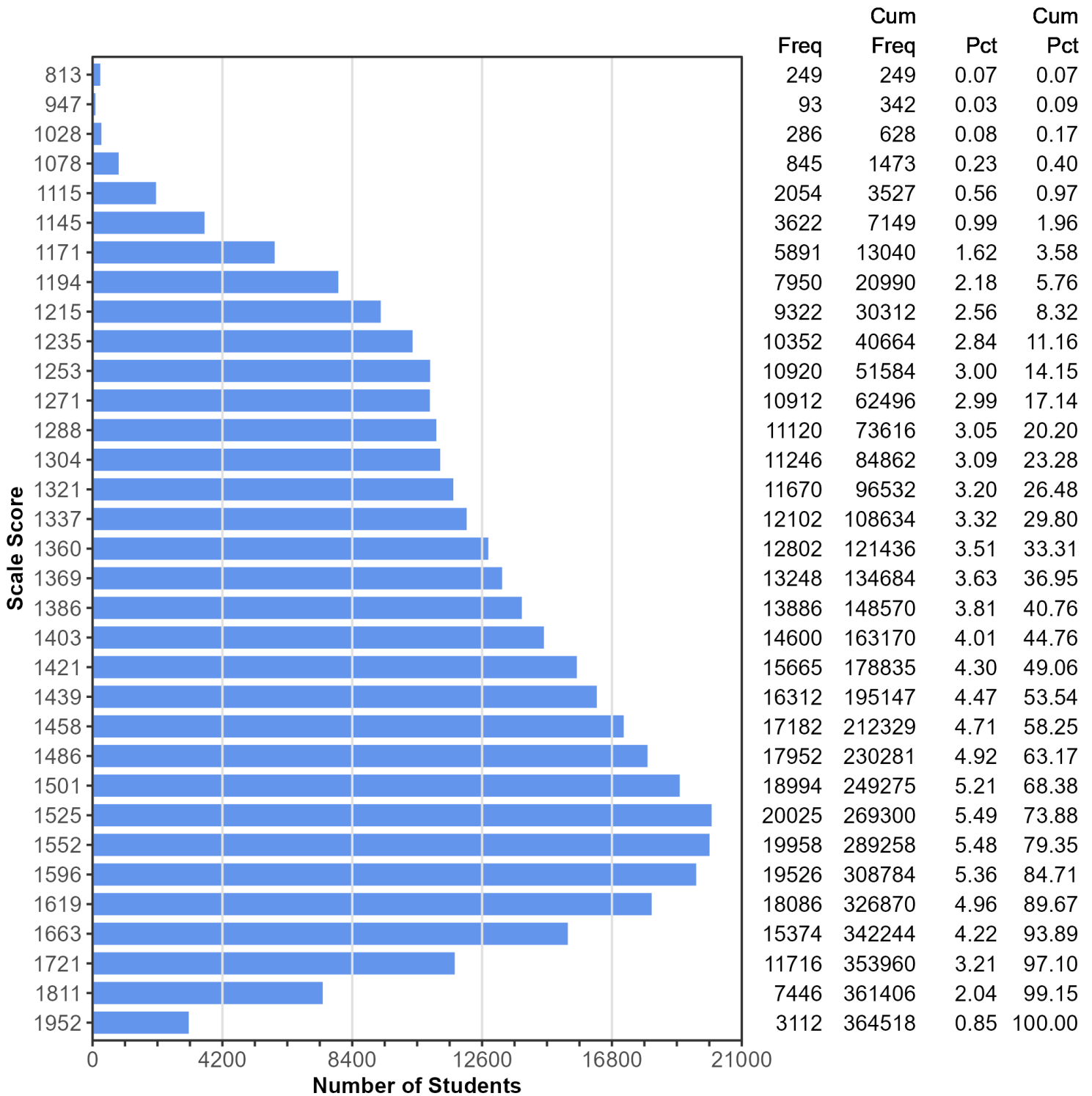
**Table B.7.2. Spring 2022 STAAR Spanish Grades 3–8 Assessments
Scale Score Descriptive Statistics**

Subject		N	Mean	Median	Mode	Range	Interquartile Range	SD	Variance	Skewness	Kurtosis
Grade 3	Mathematics	15,517	1379.27	1369	1253	1139	215	145.17	21073.87	0.47	0.24
Grade 4	Mathematics	10,281	1461.37	1437	1357	1141	172	129.28	16713.77	0.66	0.67
Grade 5	Mathematics	7,461	1512.76	1490	1415	1131	175	123.45	15239.75	0.73	0.74
Grade 3	Reading	29,744	1344.28	1336	1224	1358	207	151.15	22845.82	0.61	0.64
Grade 4	Reading	21,894	1428.95	1404	1263	1357	251	172.95	29912.51	0.55	0.16
Grade 5	Reading	16,173	1513.86	1502	1625	1185	215	148.90	22172.23	0.34	-0.01
Grade 5	Science	8,975	3413.12	3357	3141	4336	537	415.83	172917.57	0.79	1.11

**Table B.7.3. Spring 2022 STAAR EOC Assessments
Scale Score Descriptive Statistics**

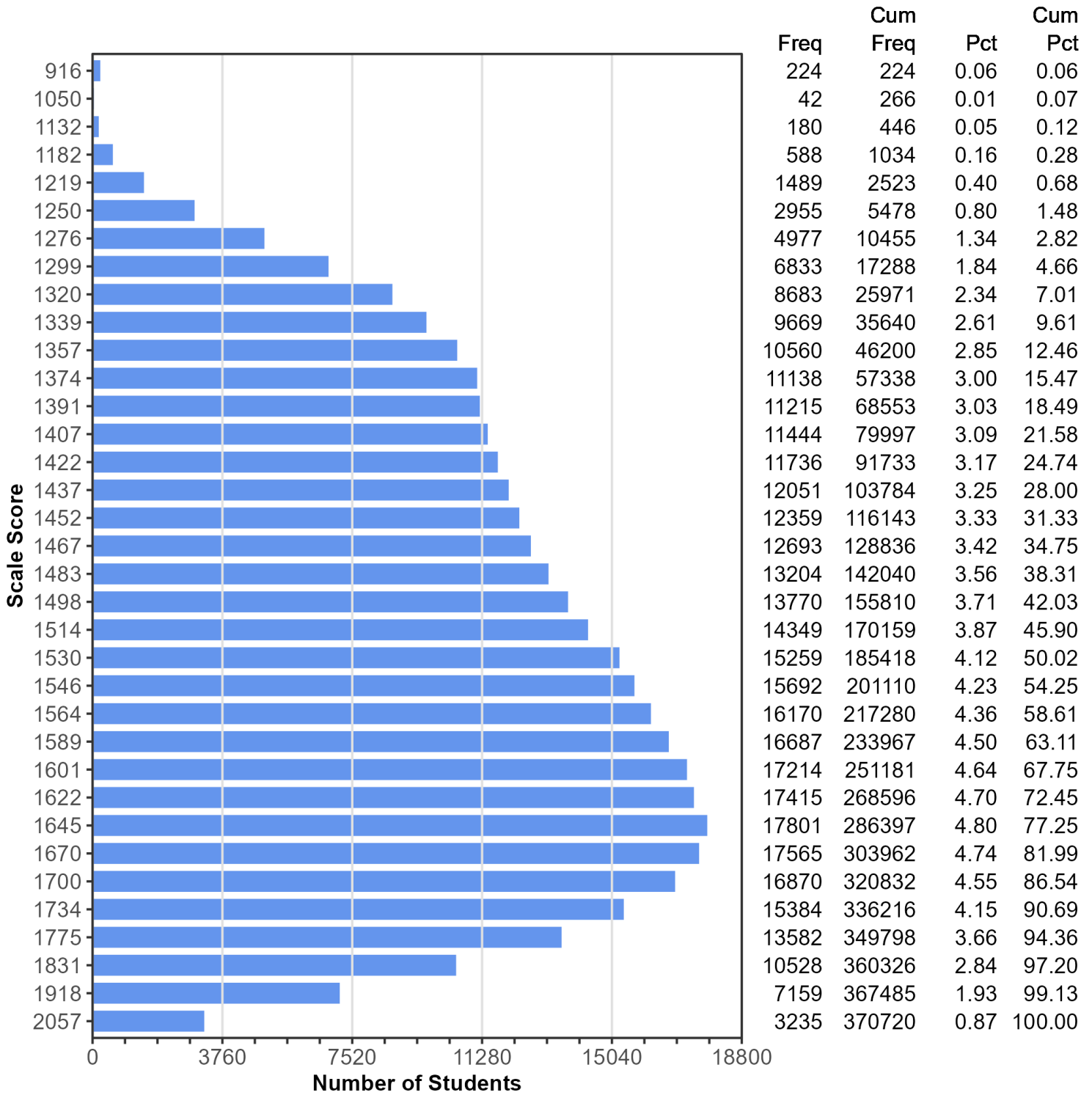
Subject	N	Mean	Median	Mode	Range	Interquartile Range	SD	Variance	Skewness	Kurtosis
Algebra I	473,632	4004.29	3937	3333	4809	868	657.66	432518.3	0.75	0.82
English I	499,908	3971.12	3943	4691	5381	803	555.12	308154.4	0.16	0.30
English II	441,776	4080.74	4069	4270	5528	767	550.25	302772.2	0.06	0.82
Biology	446,122	4122.16	4087	4398	5019	866	609.18	371104.4	0.46	0.62
U.S. History	380,567	4311.70	4333	4627	5595	789	604.19	365040.5	0.13	0.80

**Figure B.7.1. Spring 2022 STAAR English Grade 3 Mathematics
Frequency Distribution of Scale Scores
All Students**



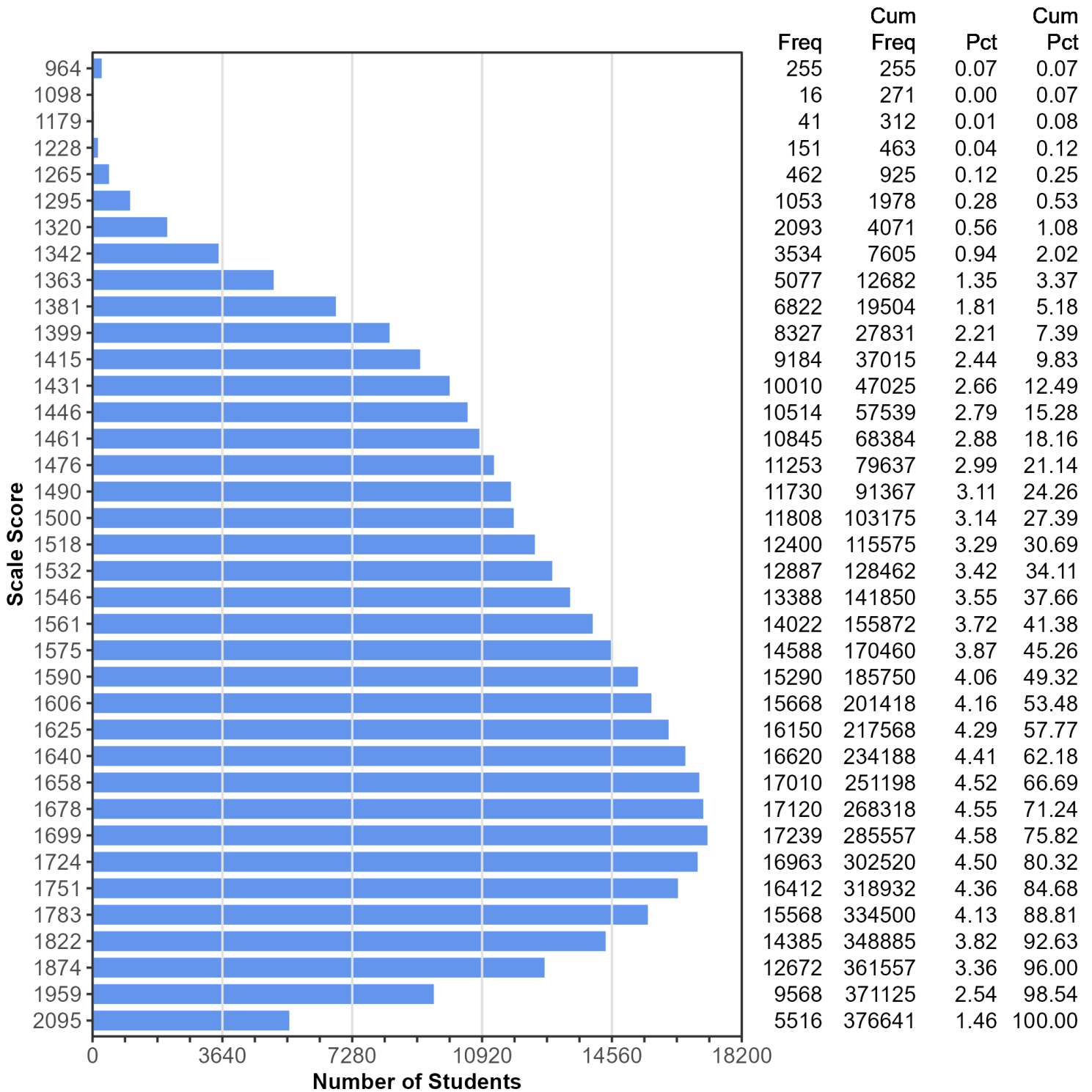
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.2. Spring 2022 STAAR English Grade 4 Mathematics
Frequency Distribution of Scale Scores
All Students**



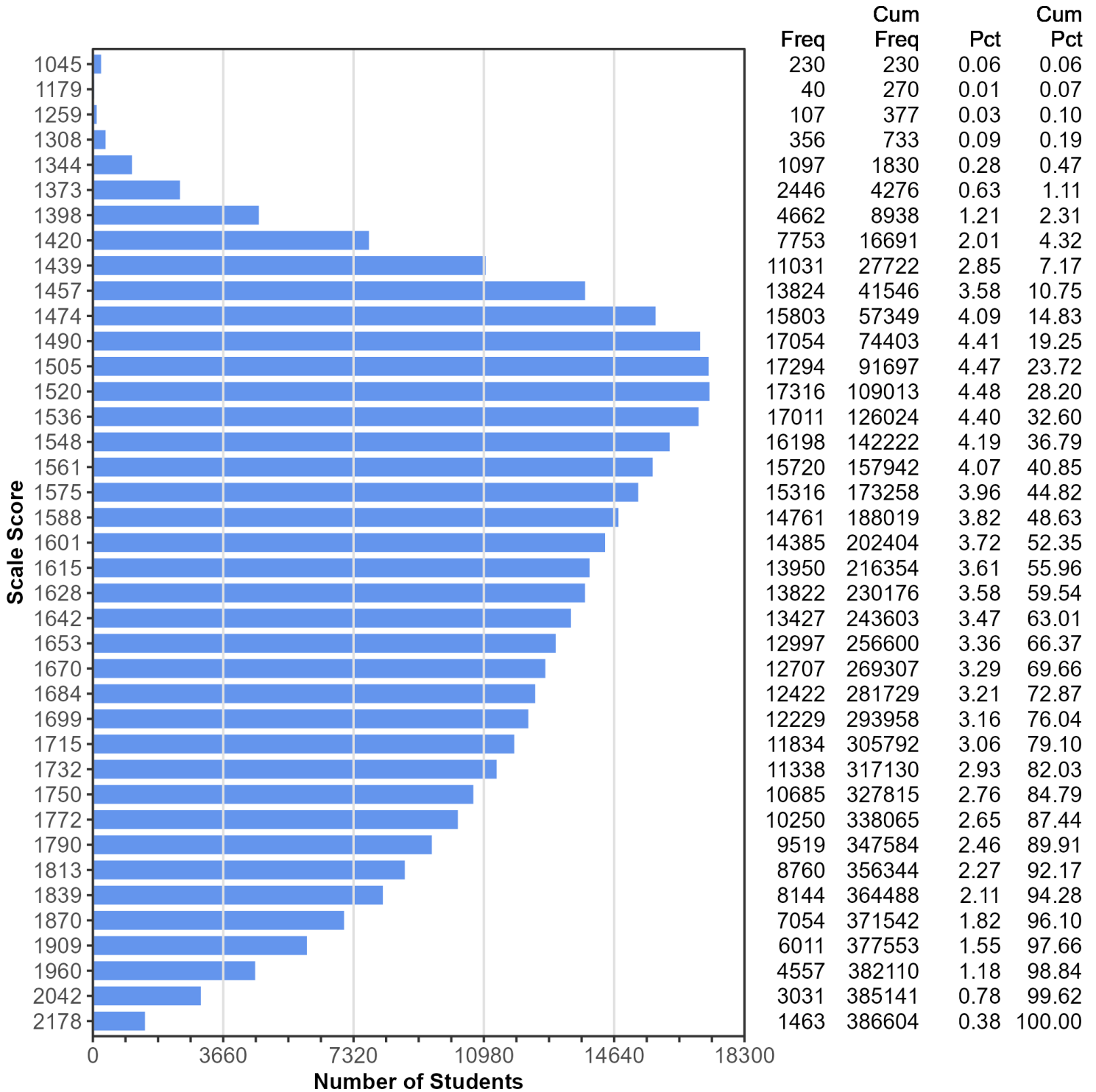
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.3. Spring 2022 STAAR English Grade 5 Mathematics
Frequency Distribution of Scale Scores
All Students**



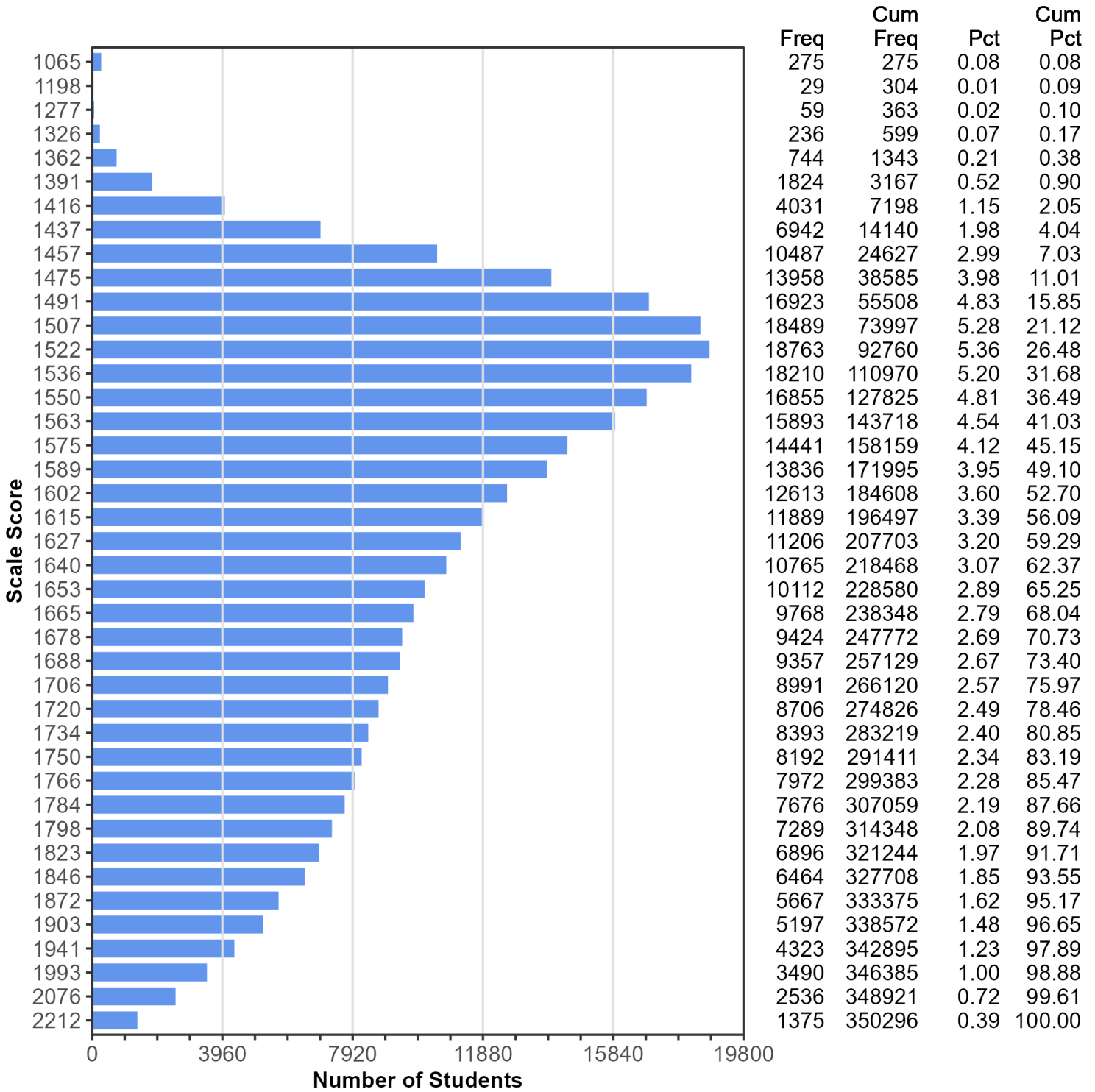
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.4. Spring 2022 STAAR English Grade 6 Mathematics
Frequency Distribution of Scale Scores
All Students**



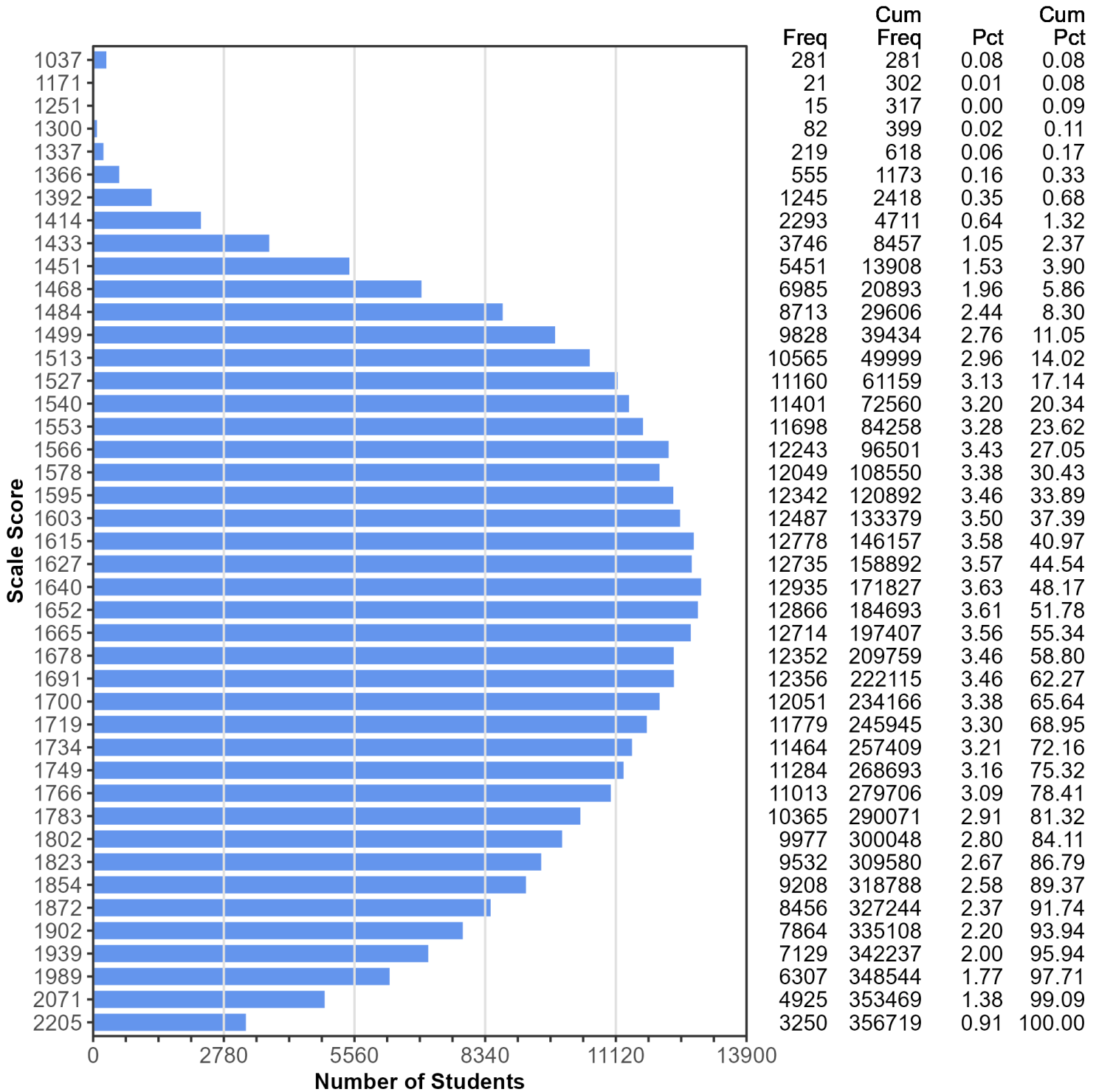
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.5. Spring 2022 STAAR English Grade 7 Mathematics
Frequency Distribution of Scale Scores
All Students**



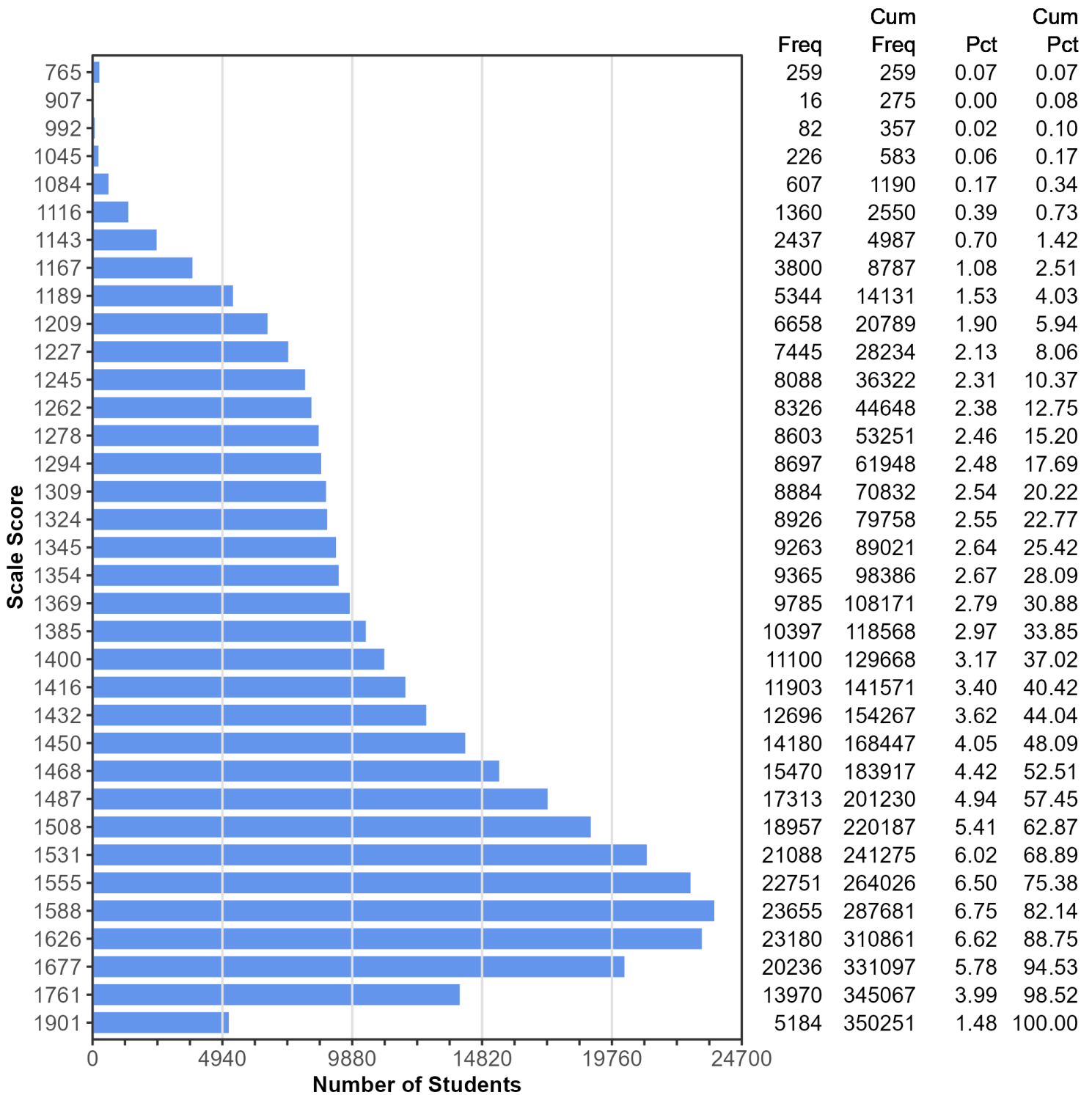
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.6. Spring 2022 STAAR English Grade 8 Mathematics
Frequency Distribution of Scale Scores
All Students**



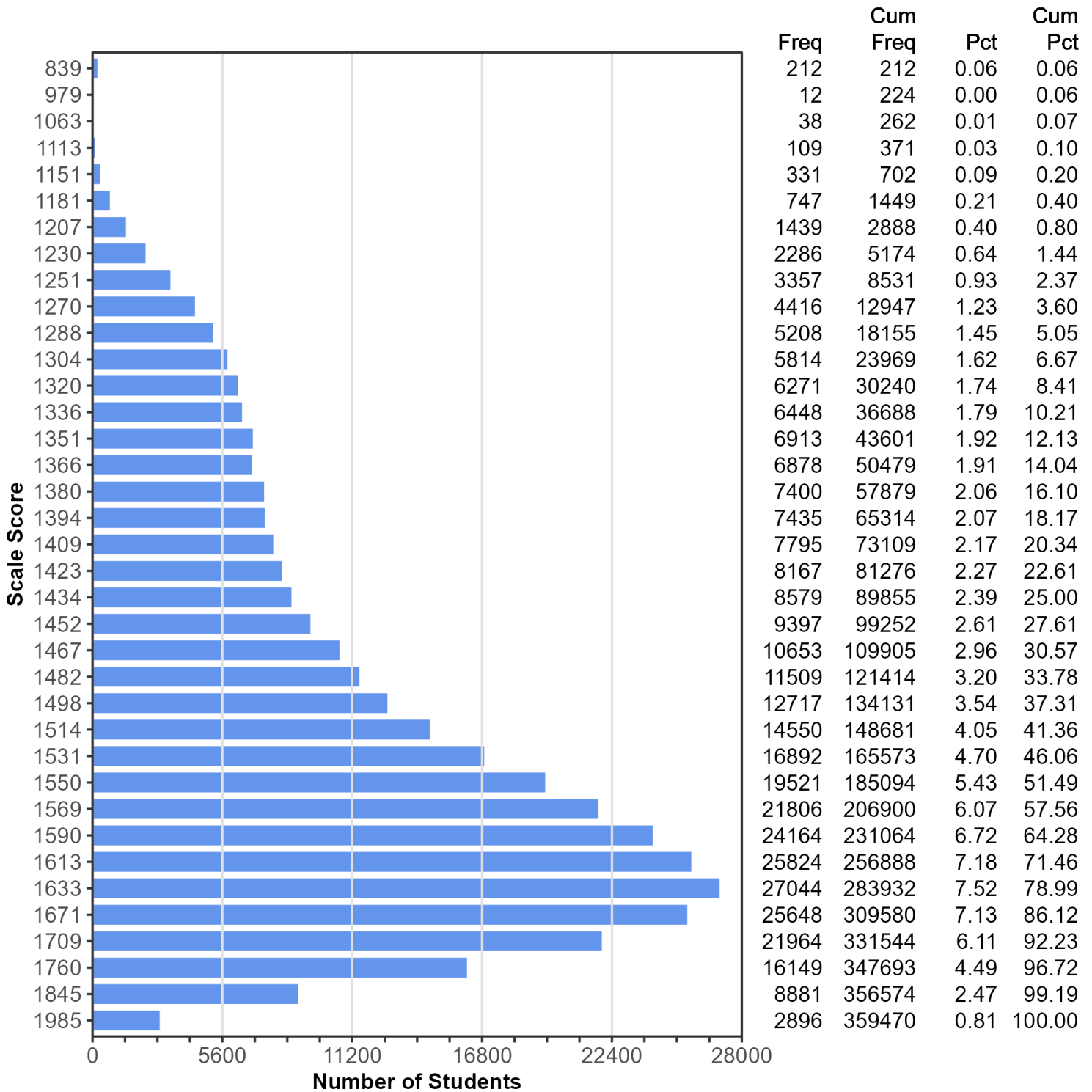
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.7. Spring 2022 STAAR English Grade 3 Reading
Frequency Distribution of Scale Scores
All Students**



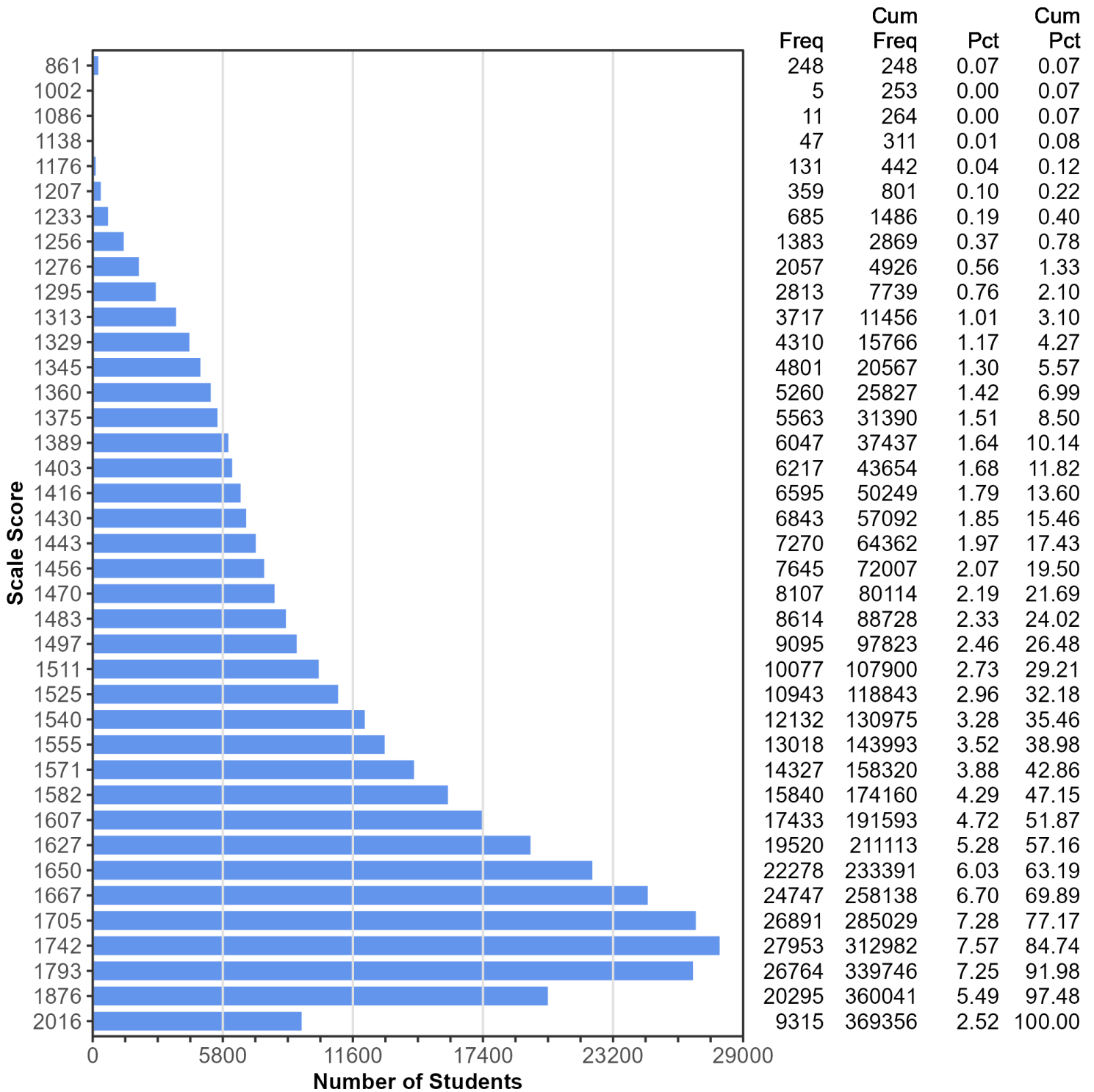
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.8. Spring 2022 STAAR English Grade 4 Reading
Frequency Distribution of Scale Scores
All Students**



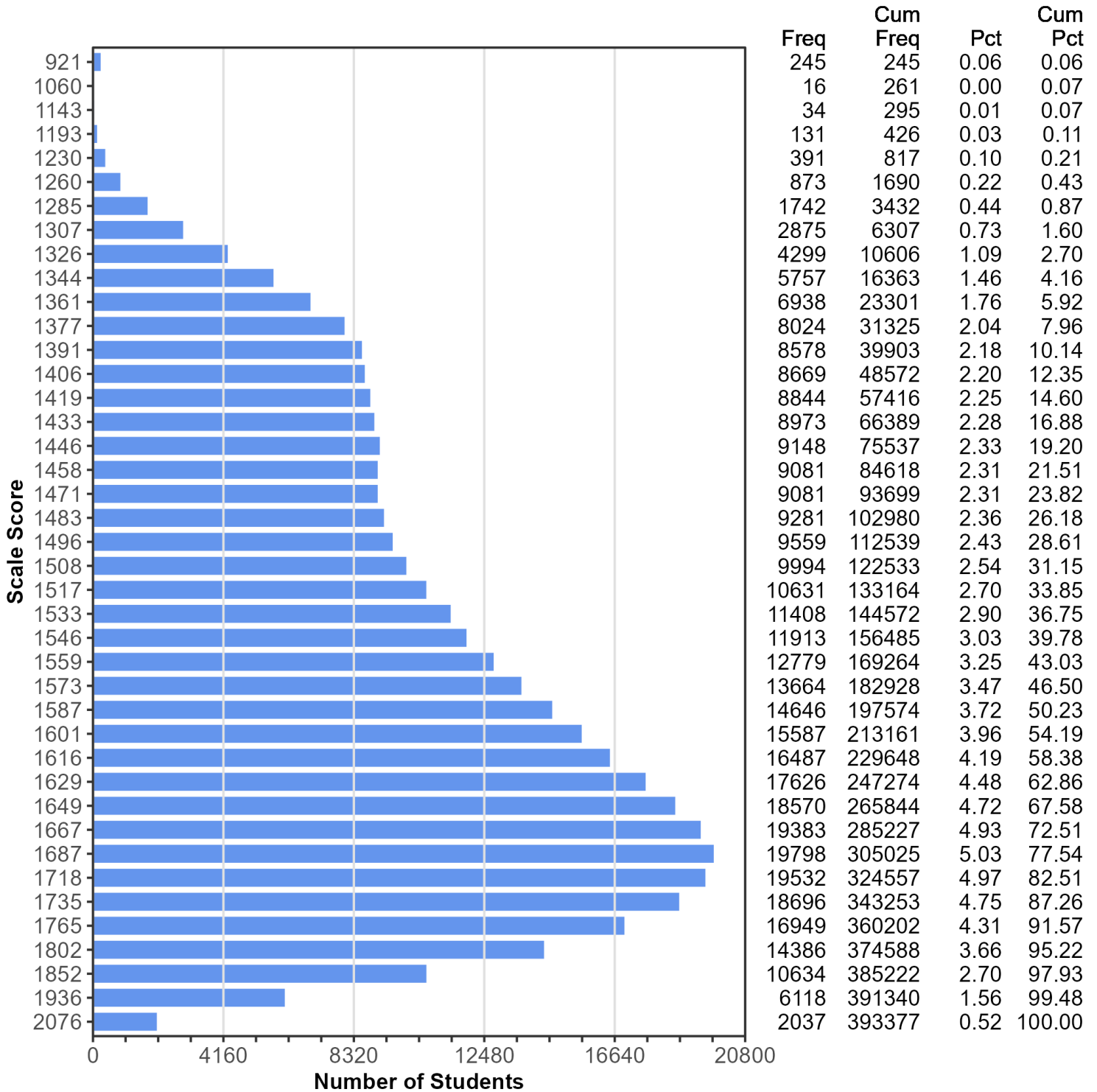
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.9. Spring 2022 STAAR English Grade 5 Reading
Frequency Distribution of Scale Scores
All Students**



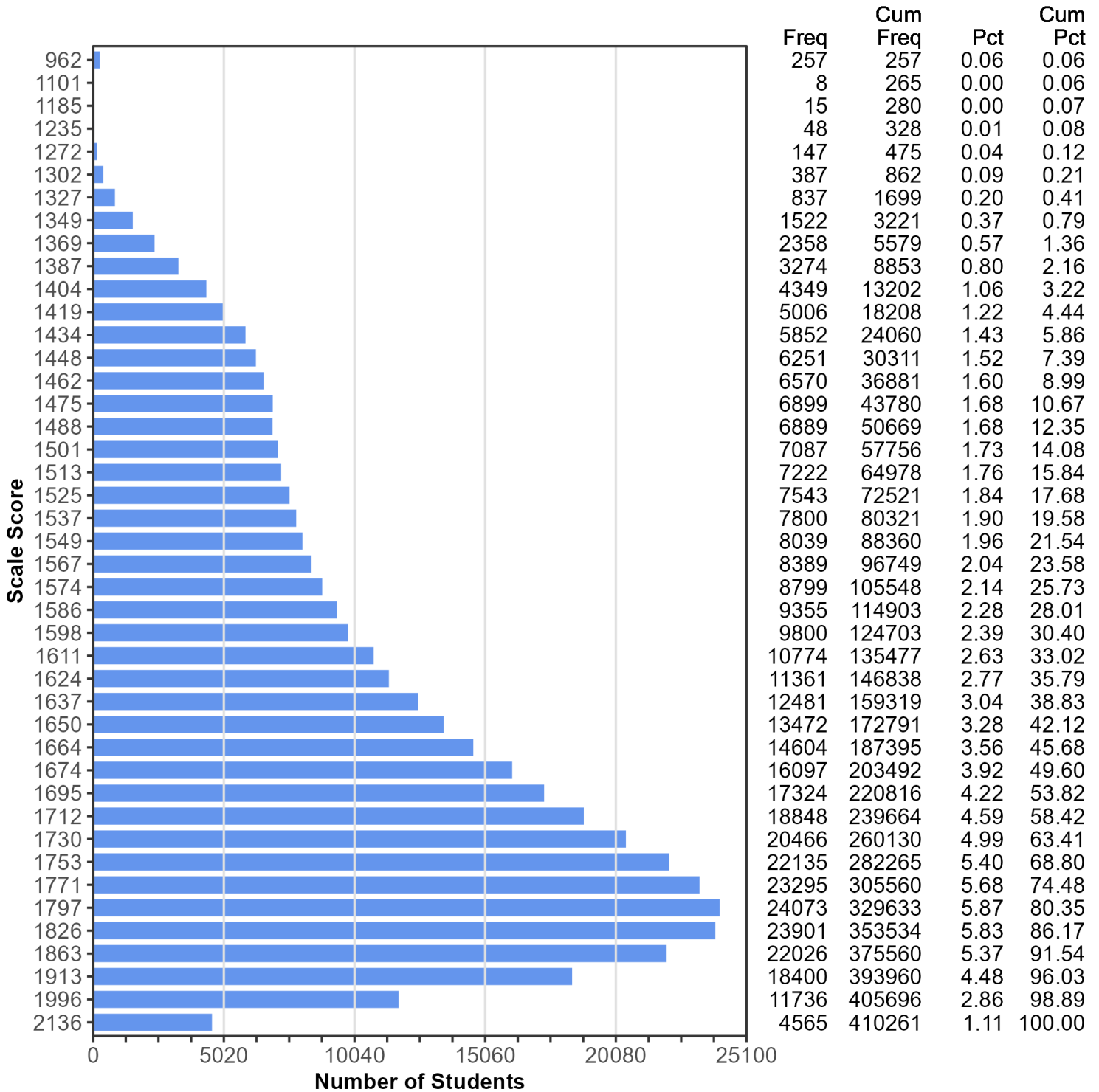
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.10. Spring 2022 STAAR English Grade 6 Reading
Frequency Distribution of Scale Scores
All Students**



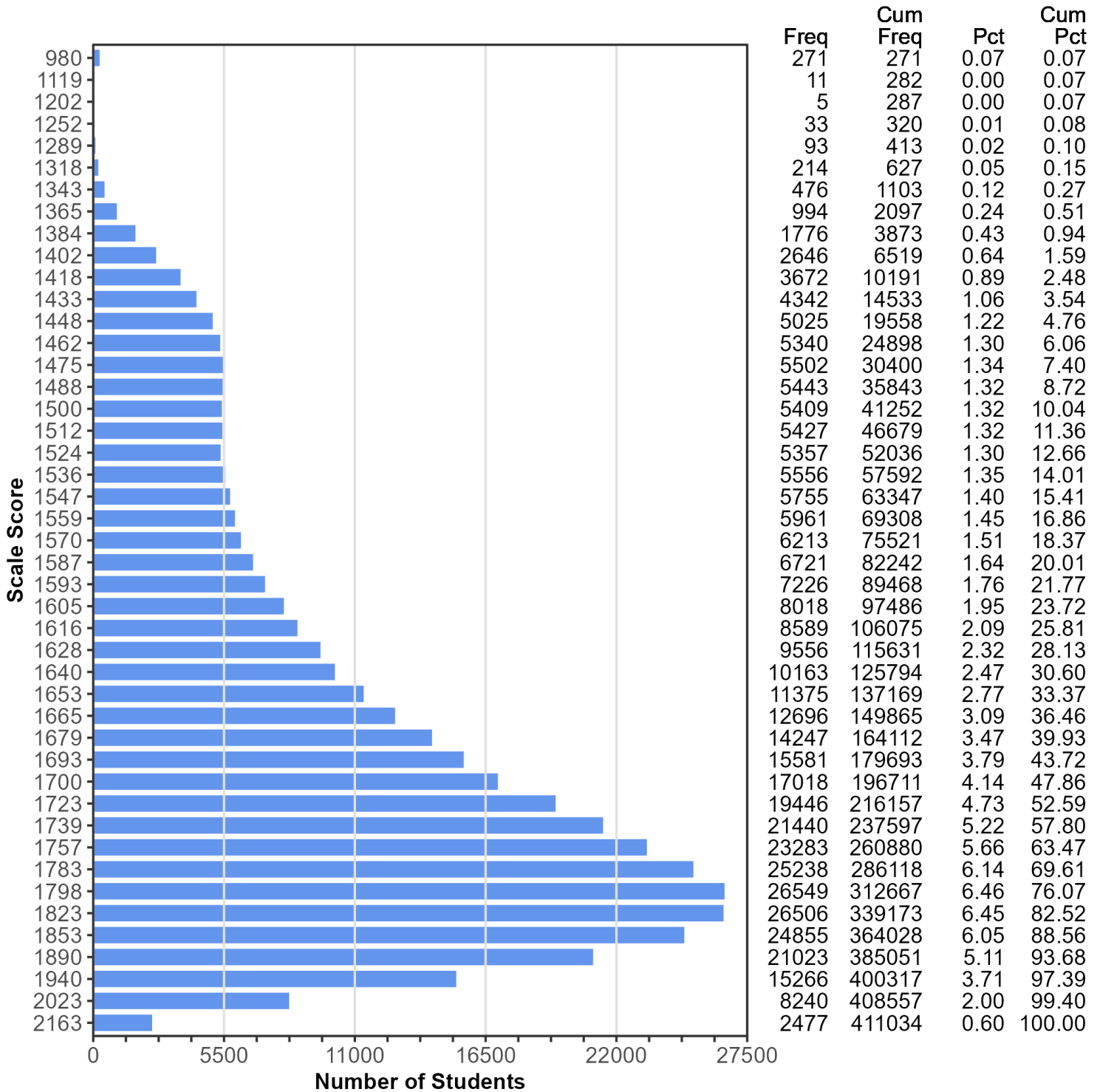
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.11. Spring 2022 STAAR English Grade 7 Reading
Frequency Distribution of Scale Scores
All Students**



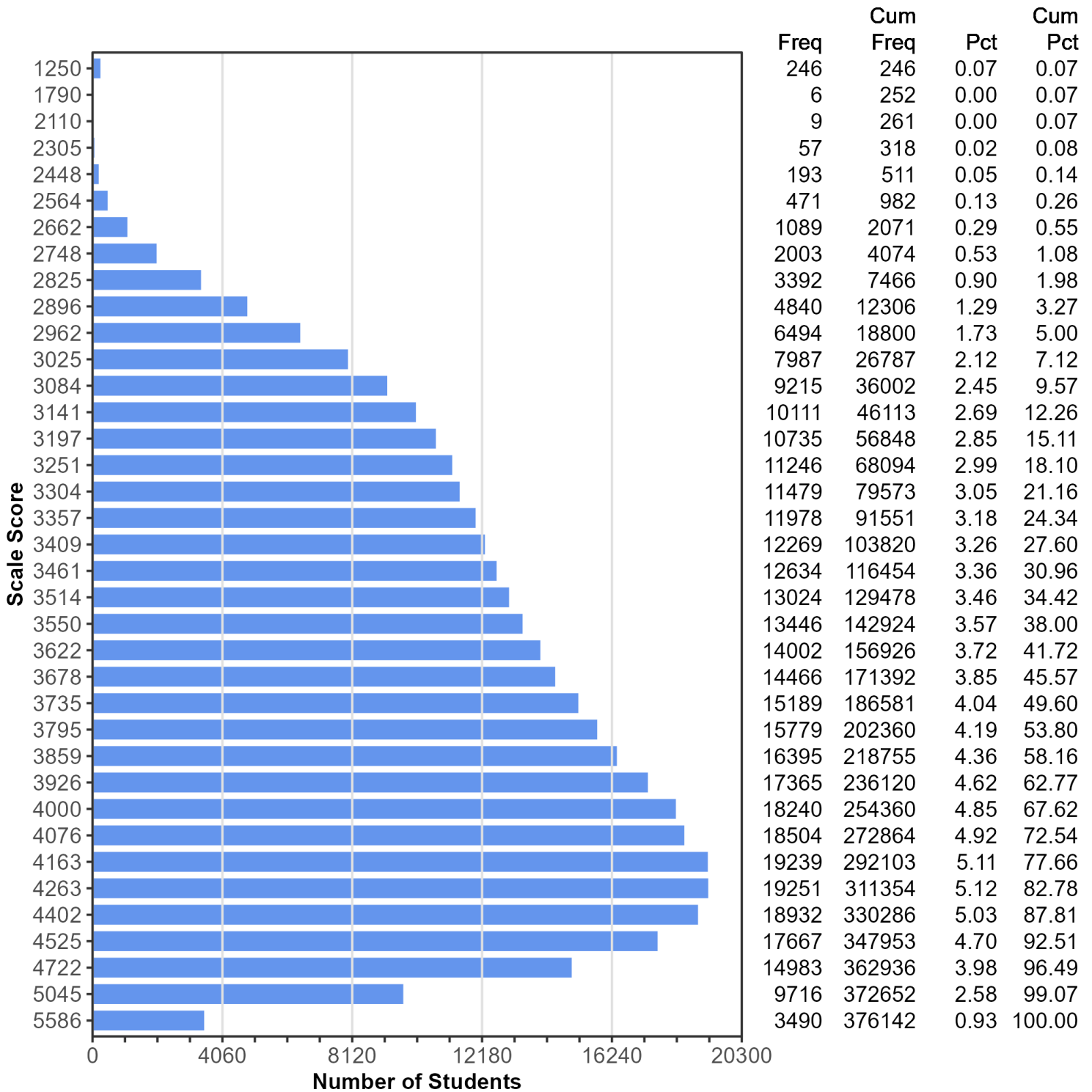
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.12. Spring 2022 STAAR English Grade 8 Reading
Frequency Distribution of Scale Scores
All Students**



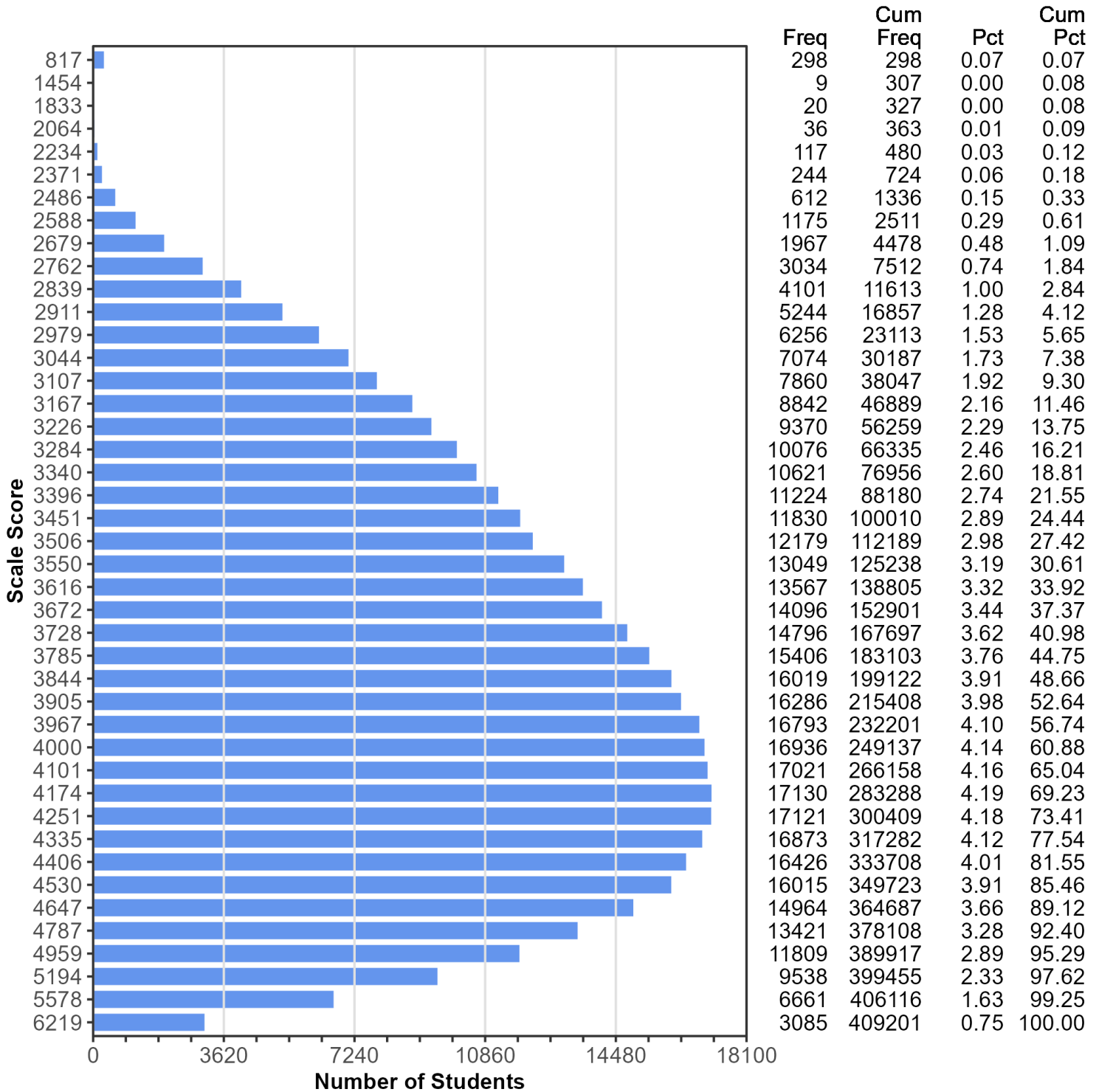
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.13. Spring 2022 STAAR English Grade 5 Science
Frequency Distribution of Scale Scores
All Students**



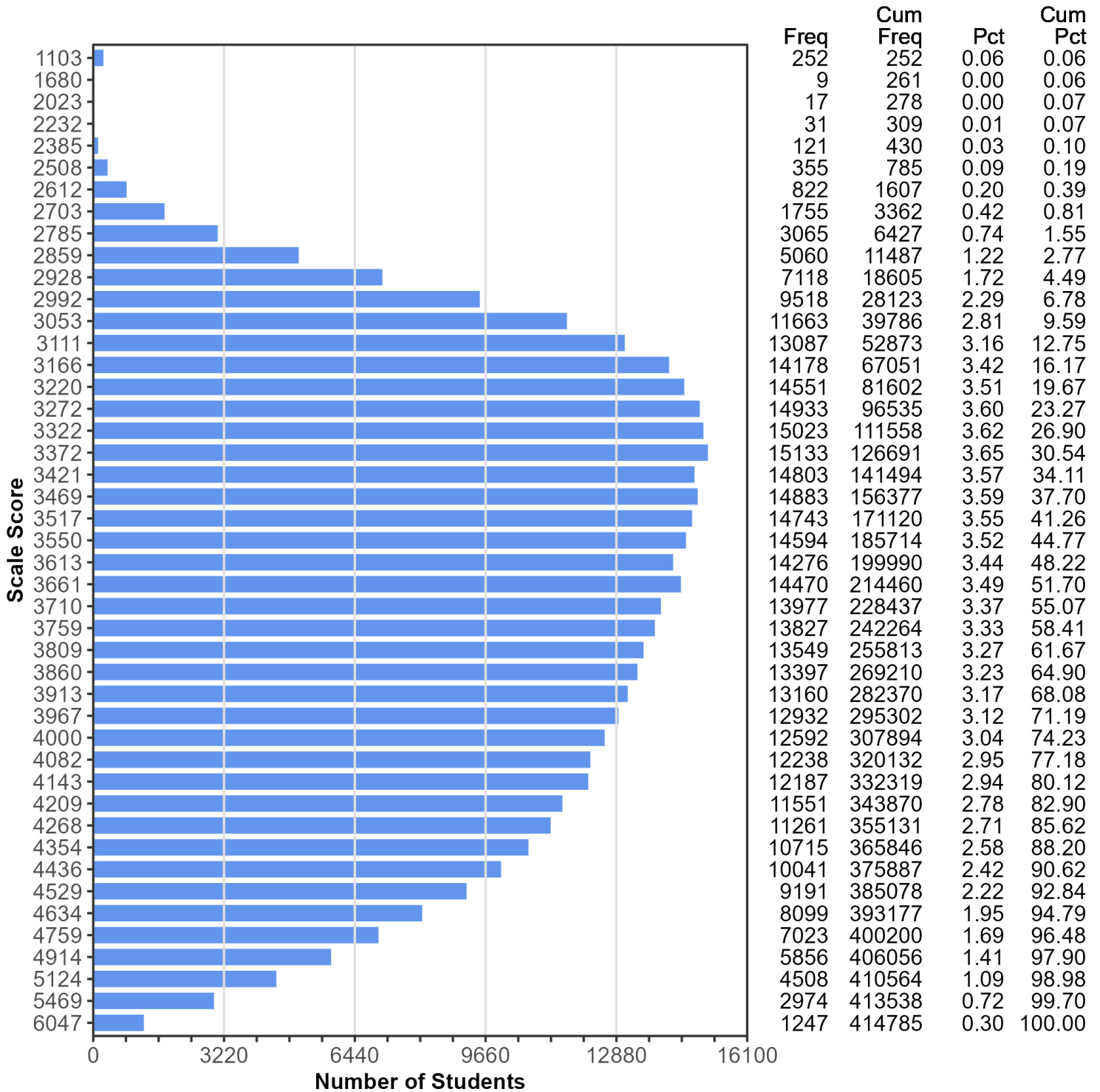
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.14. Spring 2022 STAAR English Grade 8 Science
Frequency Distribution of Scale Scores
All Students**



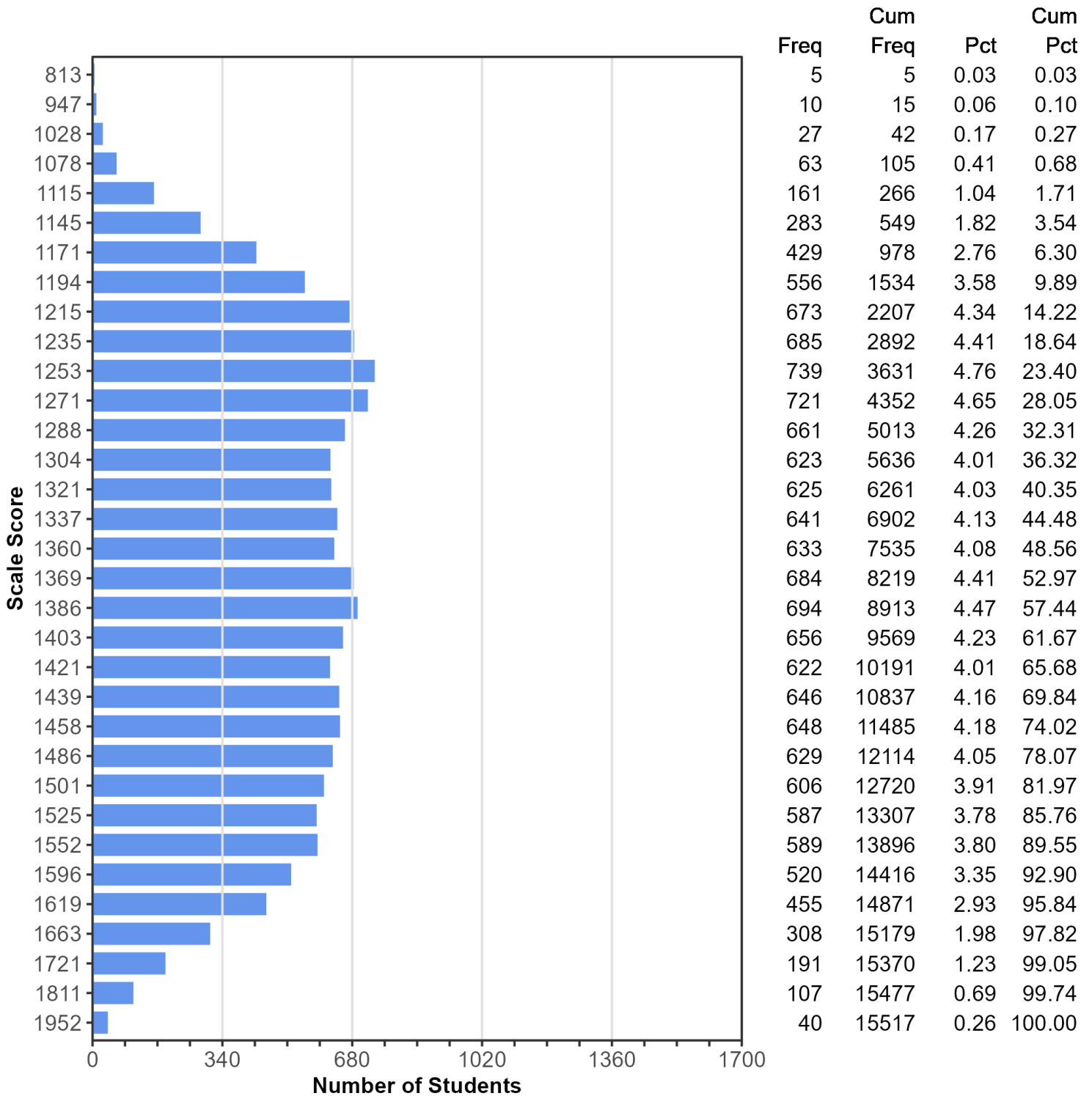
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.15. Spring 2022 STAAR English Grade 8 Social Studies
Frequency Distribution of Scale Scores
All Students**



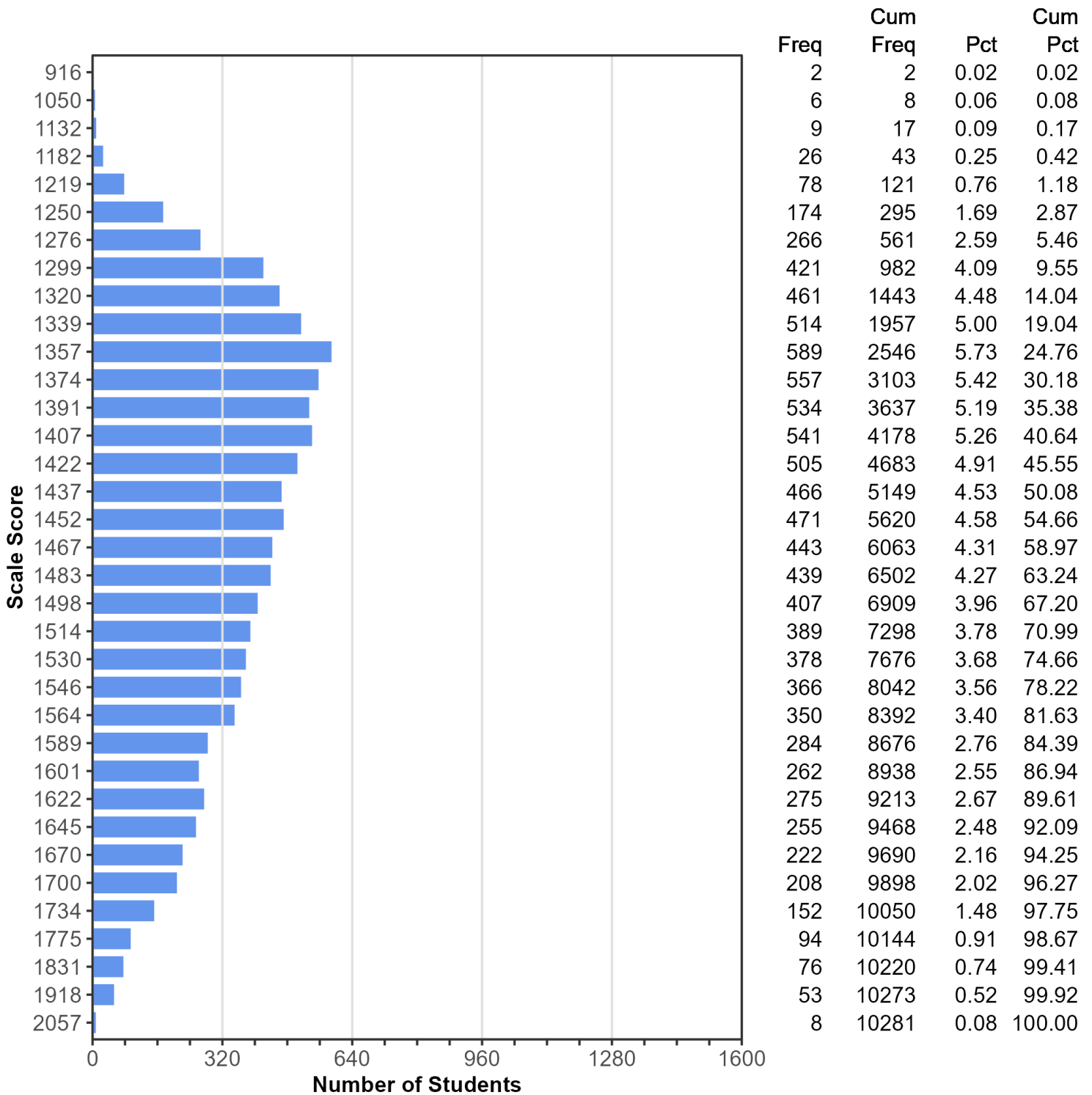
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.16. Spring 2022 STAAR Spanish Grade 3 Mathematics
Frequency Distribution of Scale Scores
All Students**



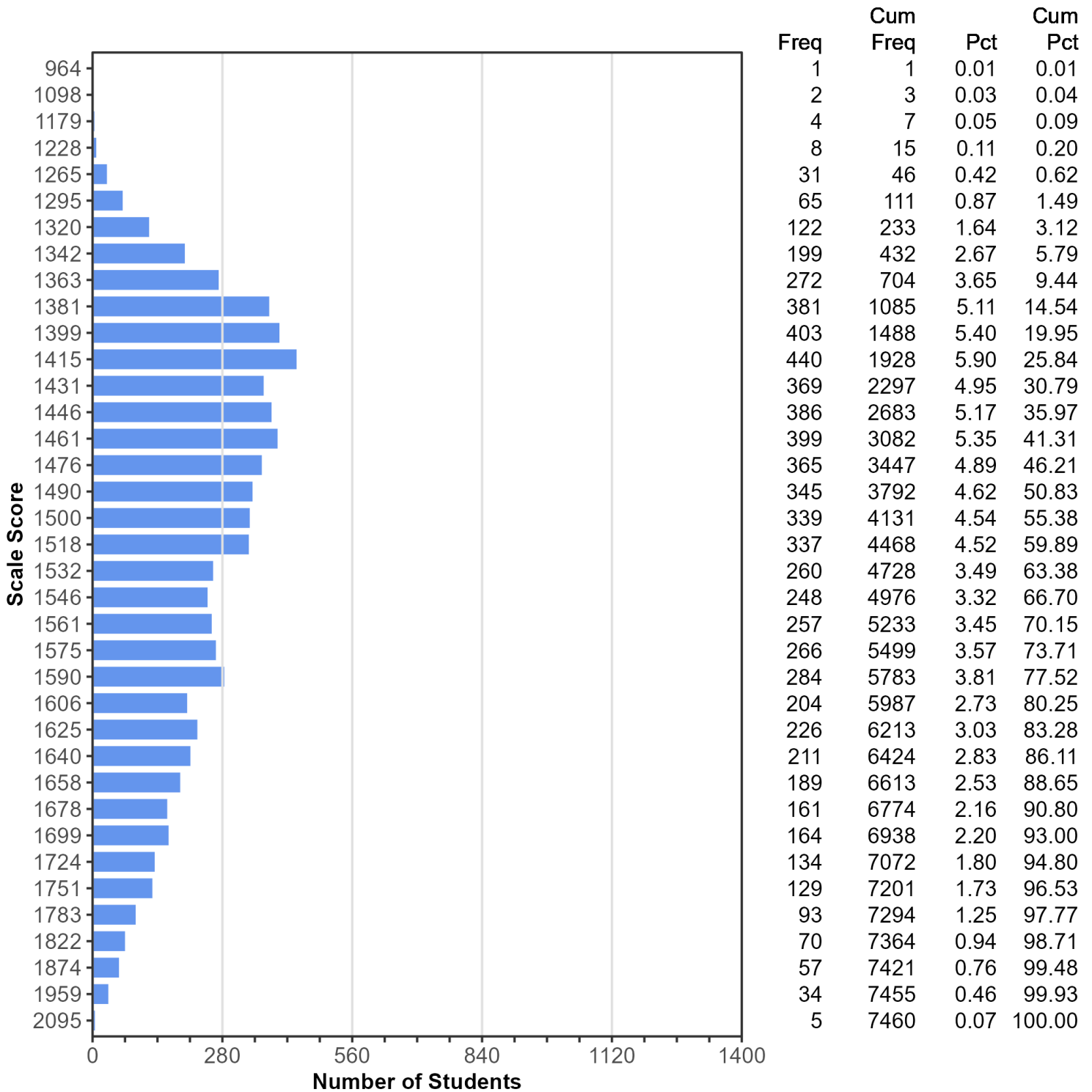
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.17. Spring 2022 STAAR Spanish Grade 4 Mathematics
Frequency Distribution of Scale Scores
All Students**



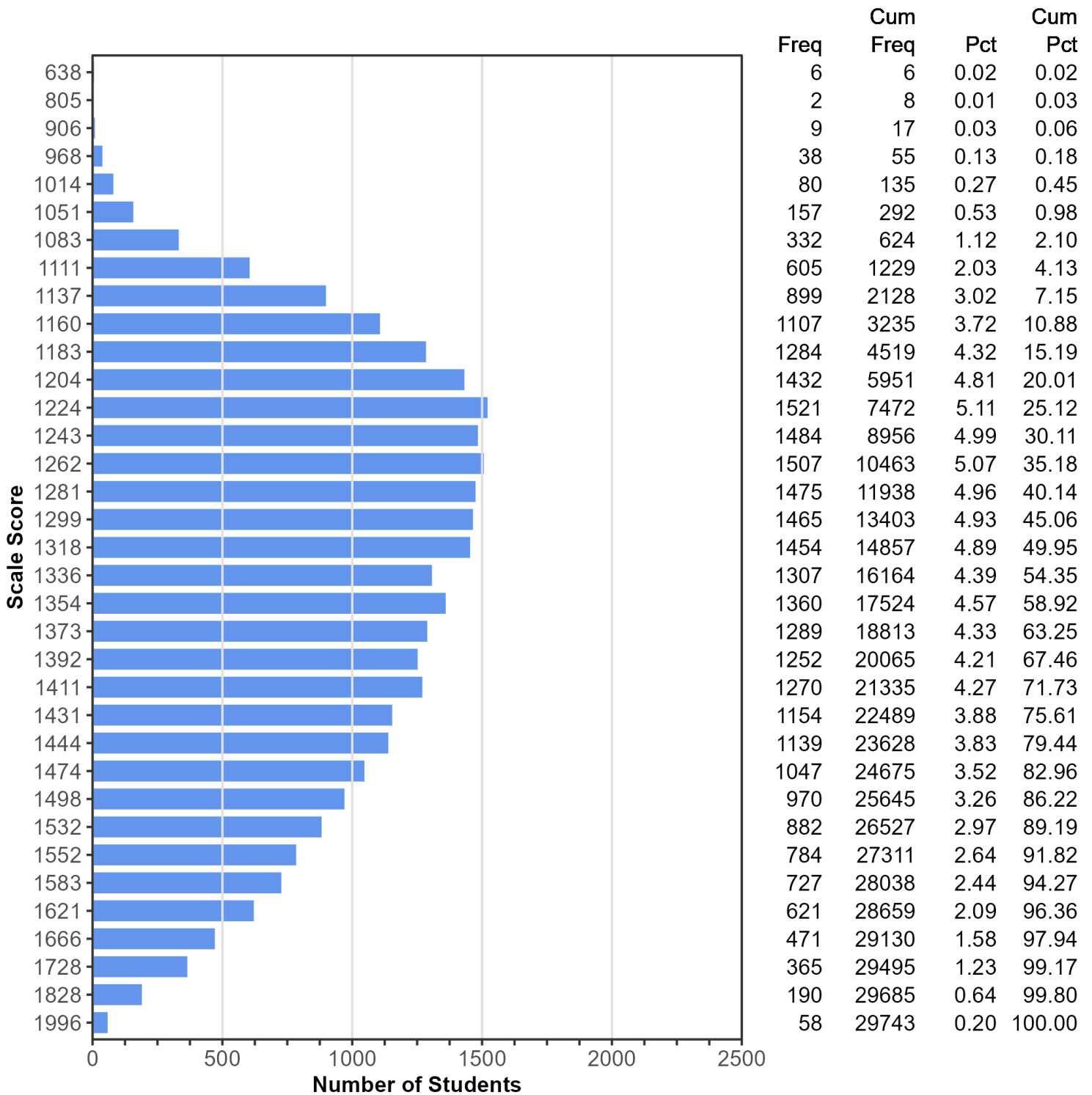
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.18. Spring 2022 STAAR Spanish Grade 5 Mathematics
Frequency Distribution of Scale Scores
All Students**



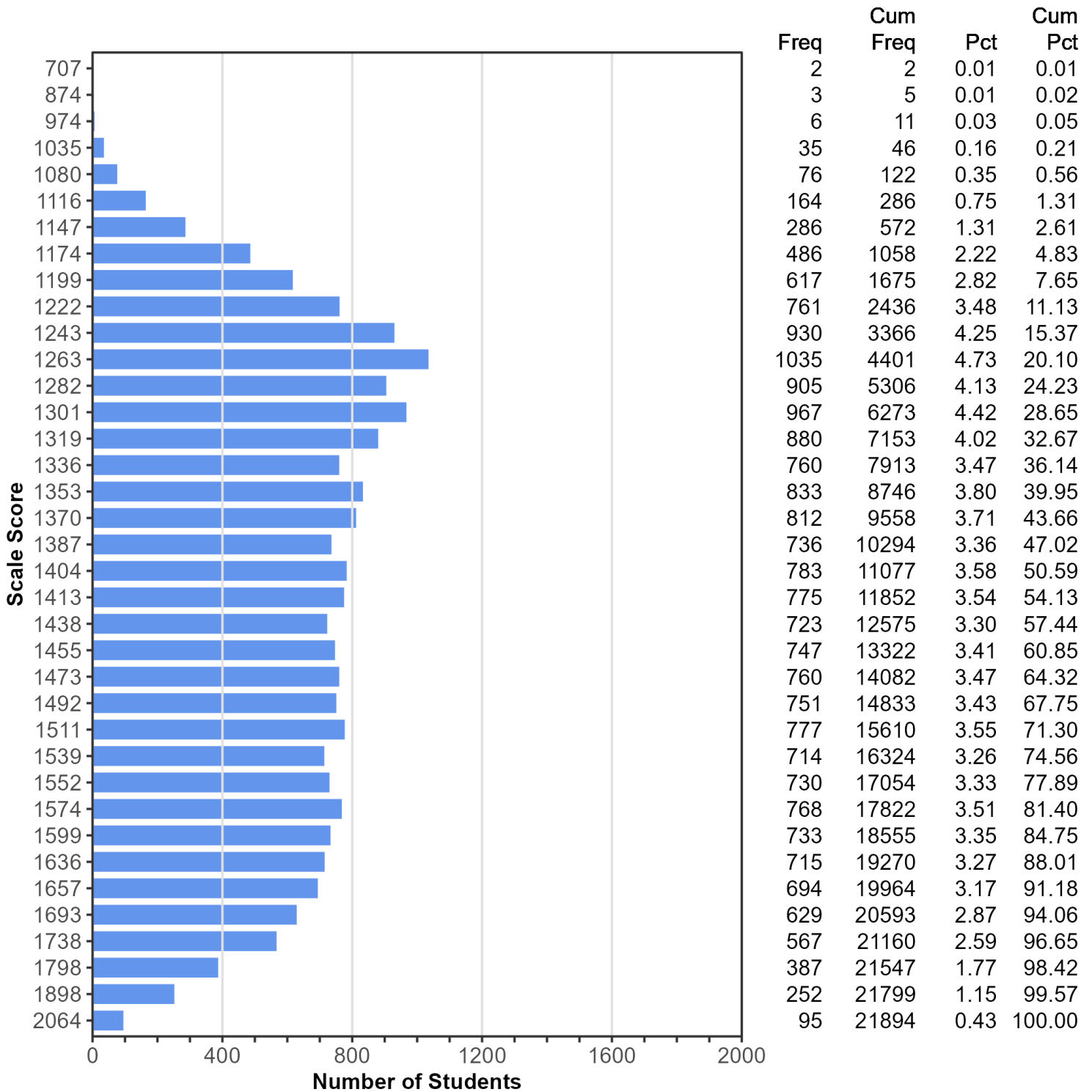
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.19. Spring 2022 STAAR Spanish Grade 3 Reading
Frequency Distribution of Scale Scores
All Students**



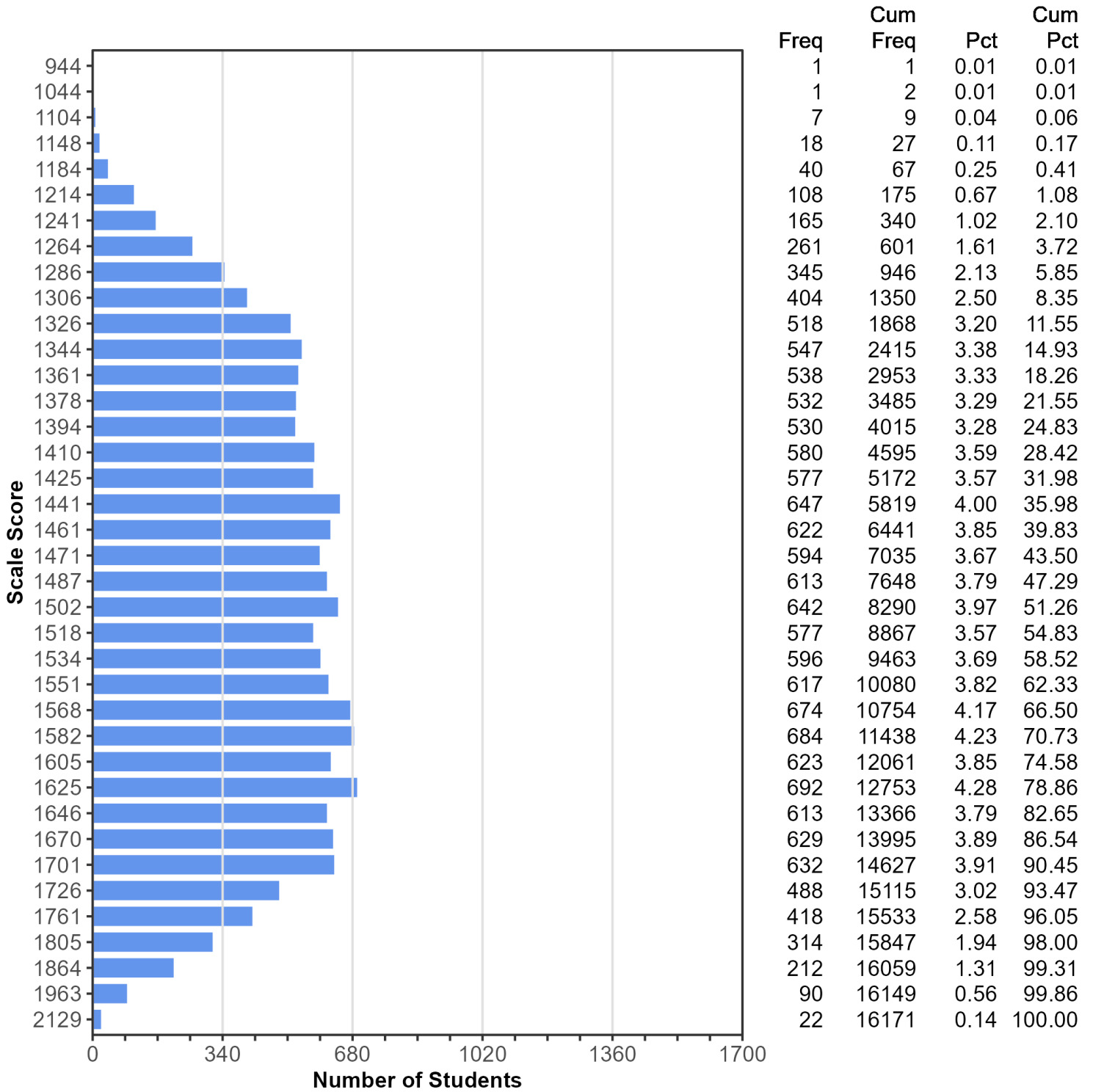
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.20. Spring 2022 STAAR Spanish Grade 4 Reading
Frequency Distribution of Scale Scores
All Students**



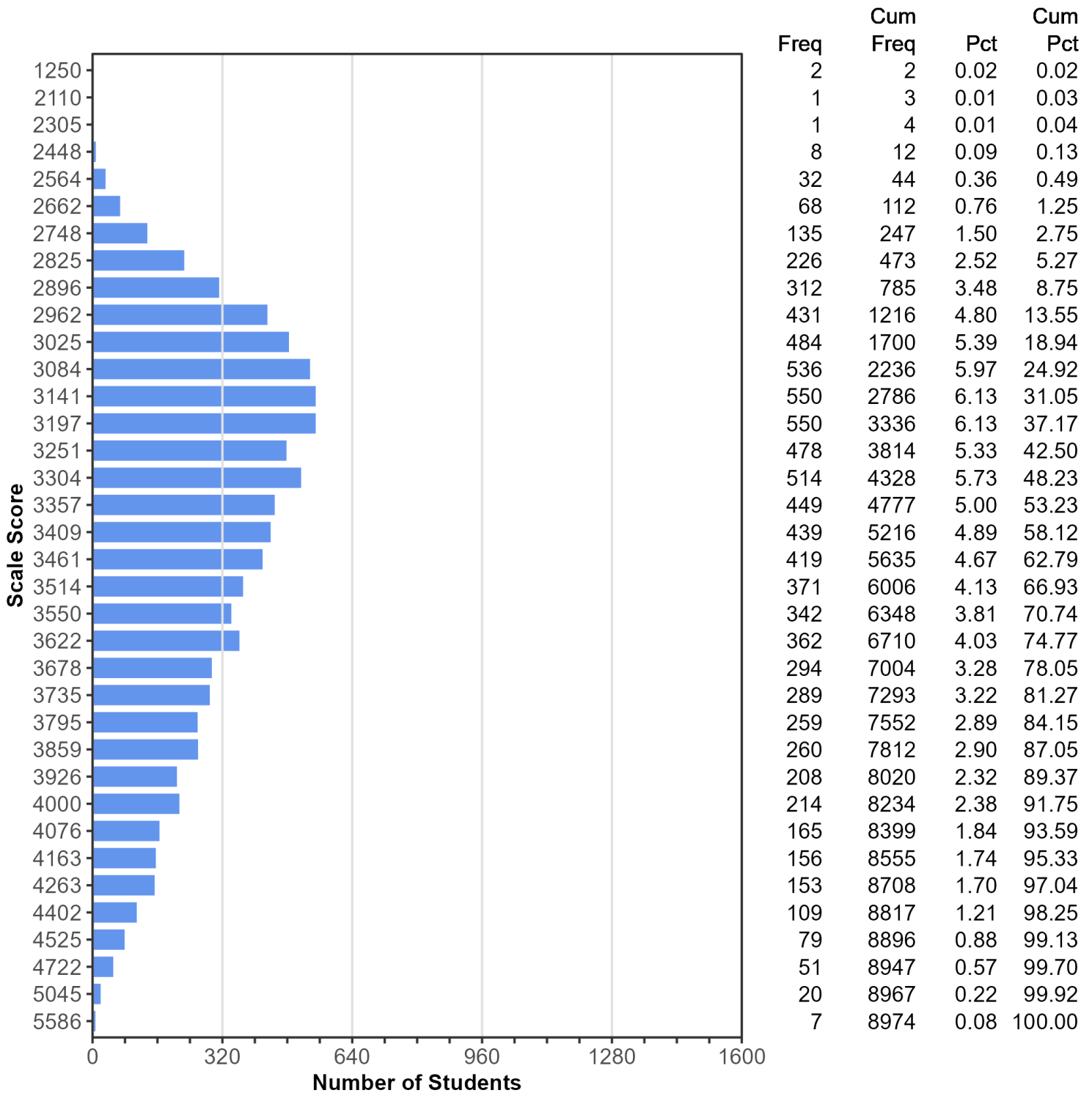
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.21. Spring 2022 STAAR Spanish Grade 5 Reading
Frequency Distribution of Scale Scores
All Students**



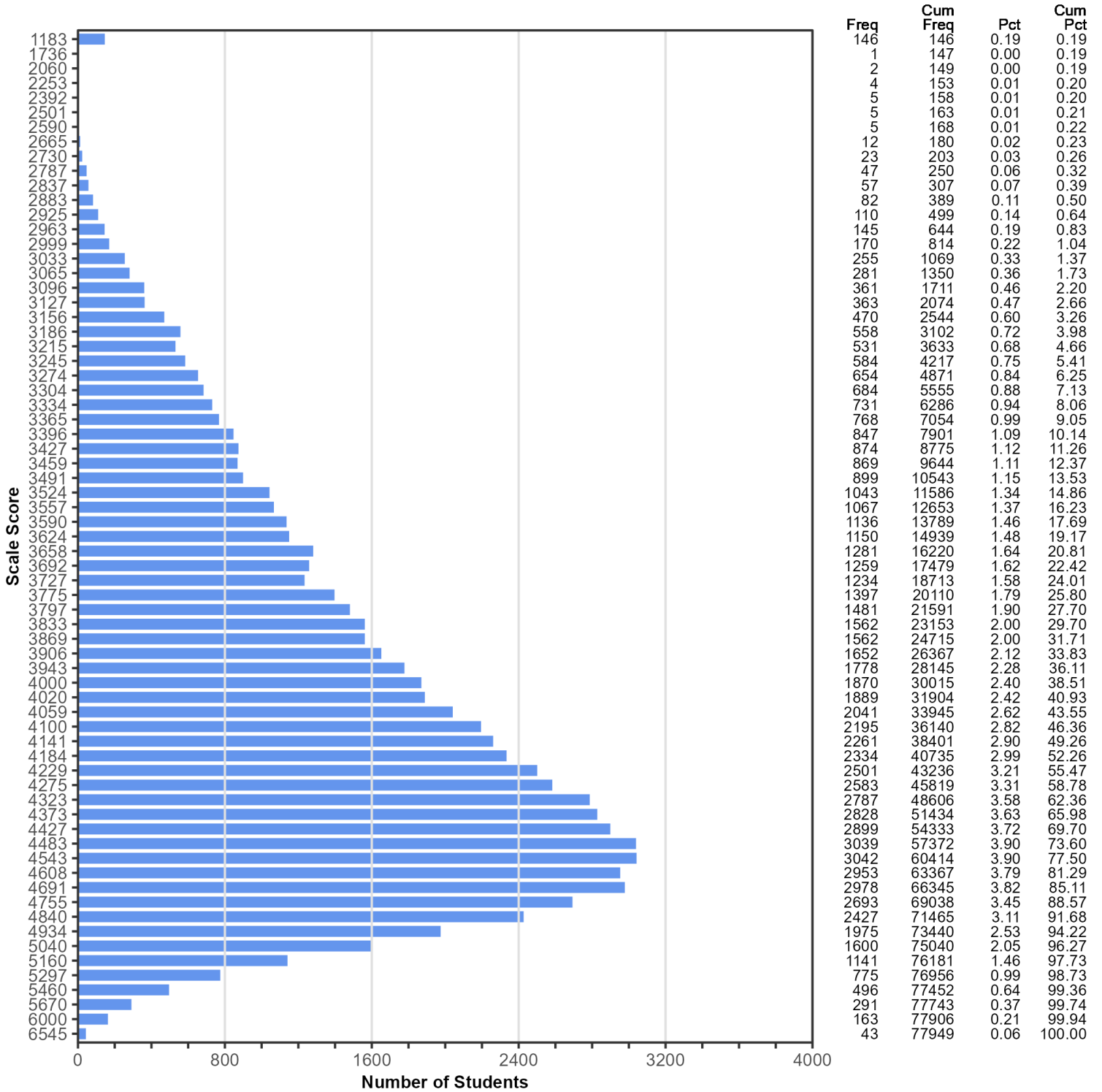
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.22. Spring 2022 STAAR Spanish Grade 5 Science
Frequency Distribution of Scale Scores
All Students**



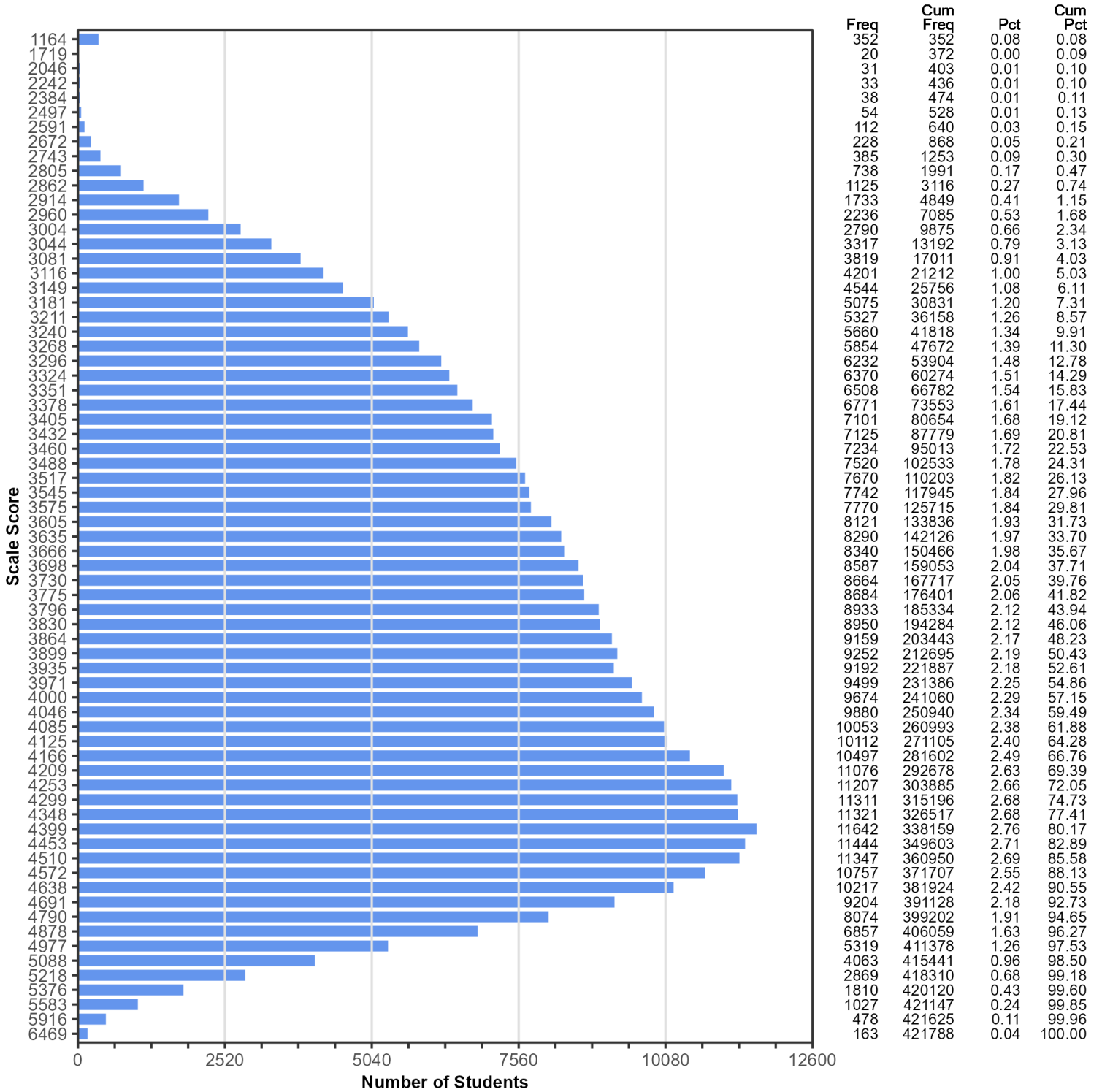
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.23. Spring 2022 STAAR EOC English I
Frequency Distribution of Scale Scores
Paper Students**



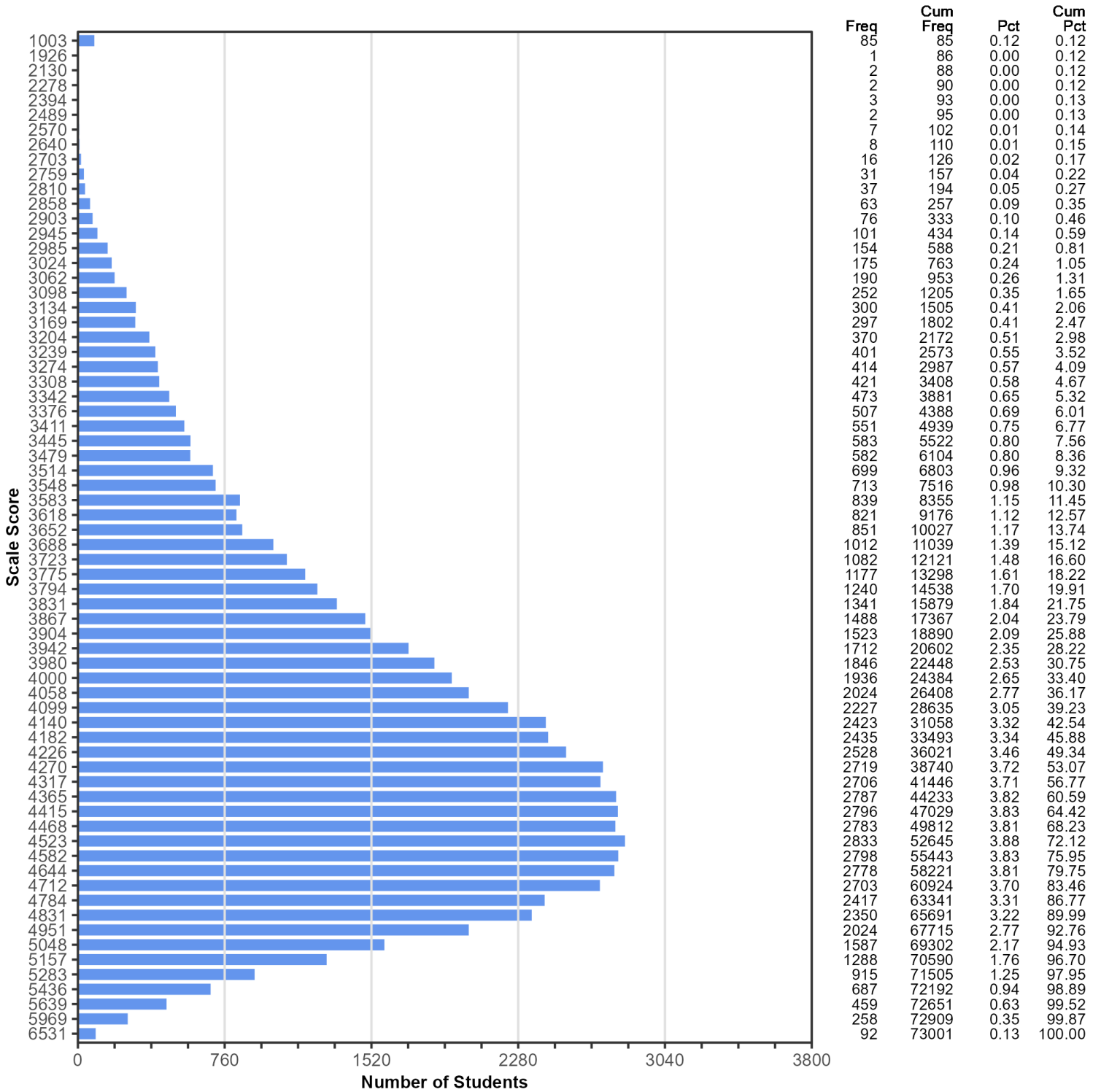
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.24. Spring 2022 STAAR EOC English I
Frequency Distribution of Scale Scores
Online Students**



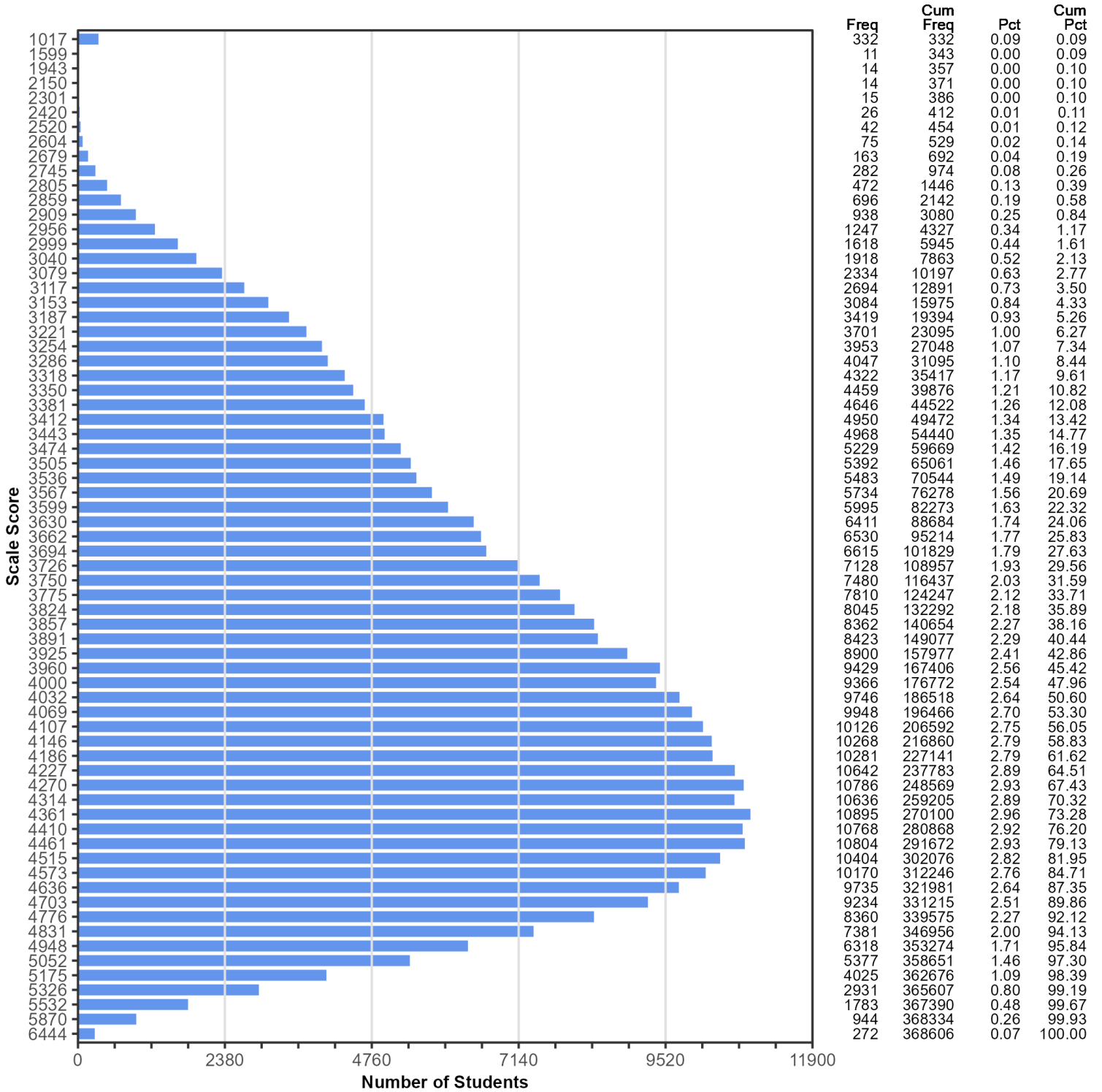
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.25. Spring 2022 STAAR EOC English II
Frequency Distribution of Scale Scores
Paper Students**



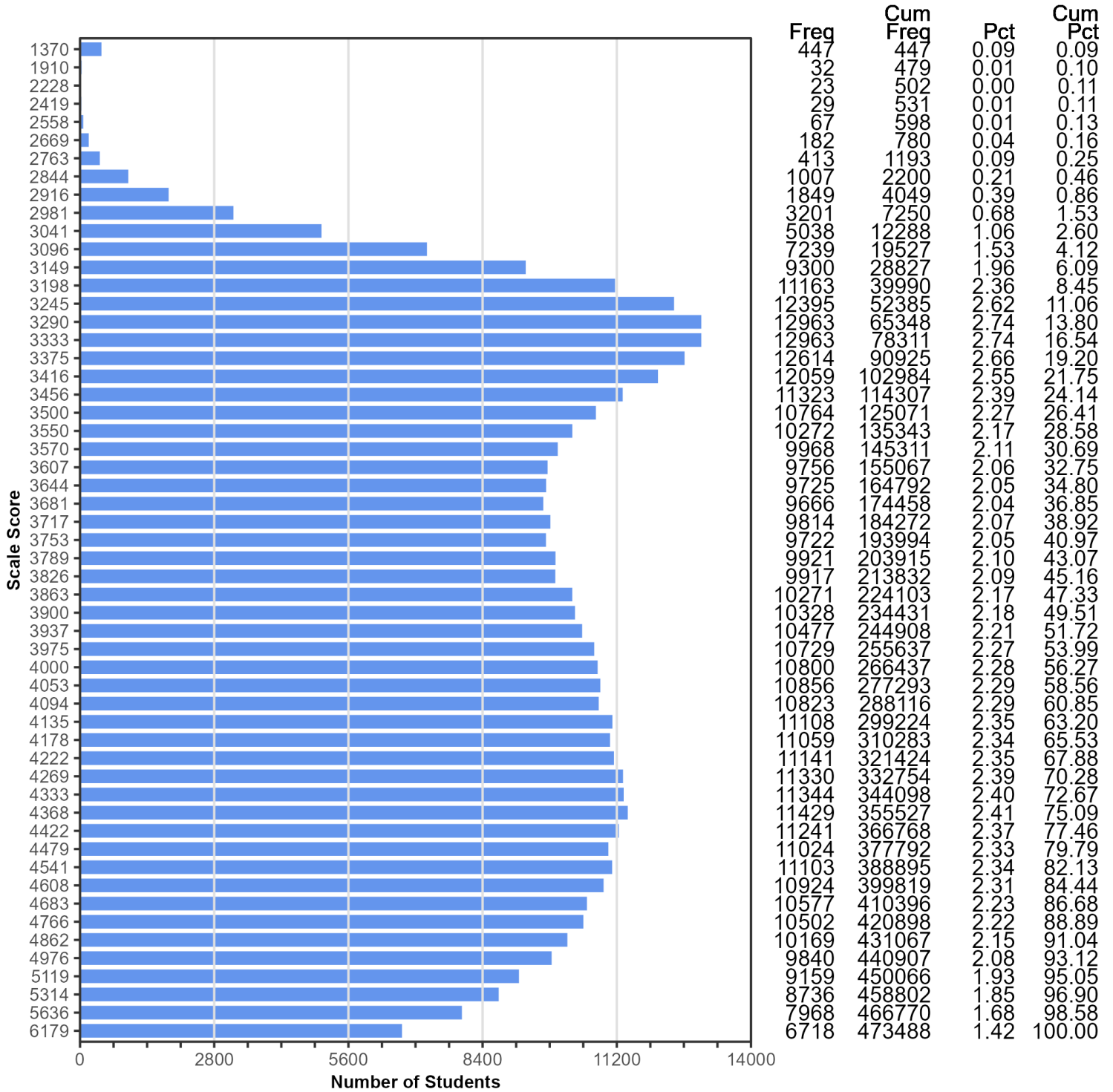
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.26. Spring 2022 STAAR EOC English II
Frequency Distribution of Scale Scores
Online Students**



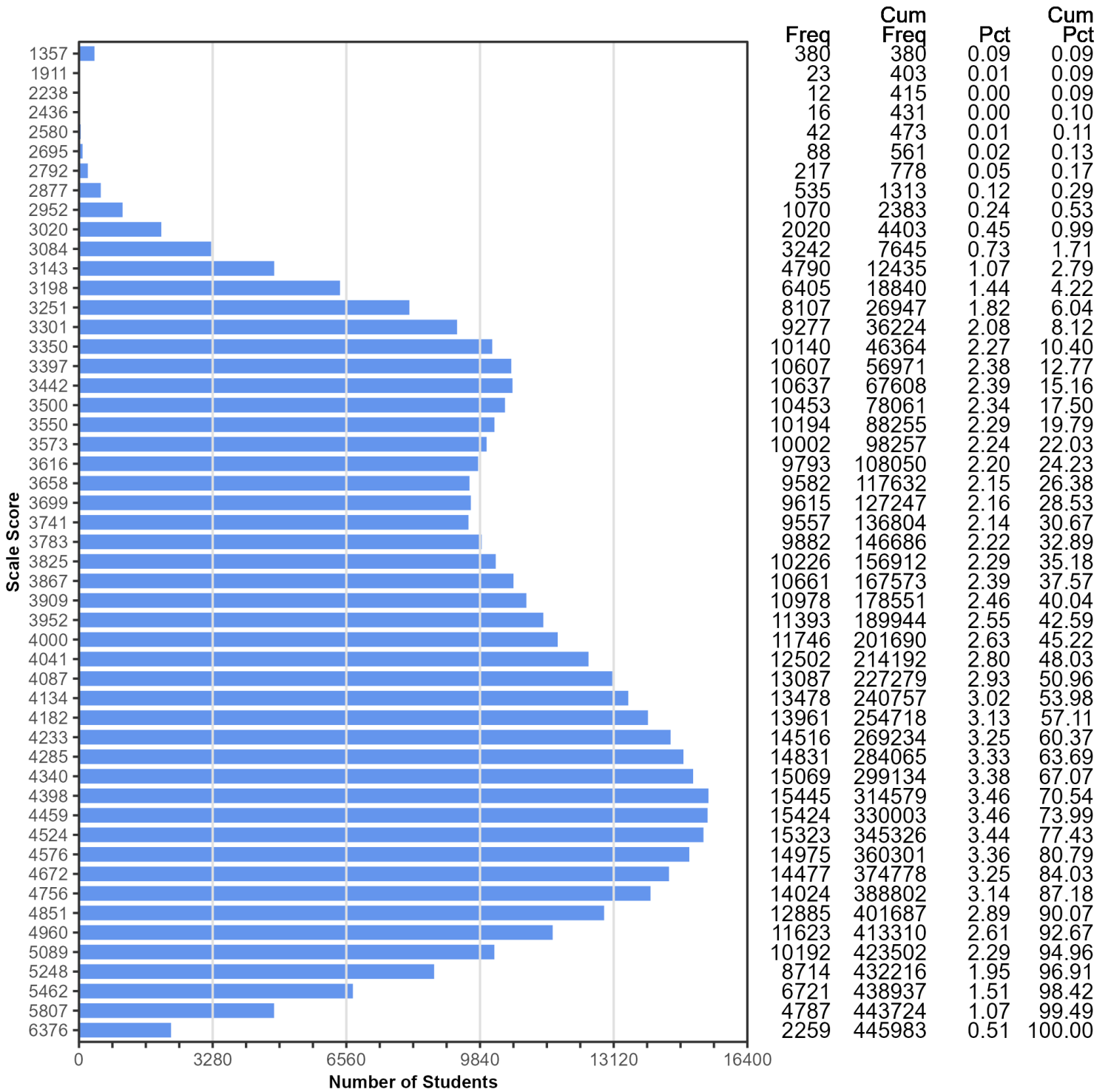
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.27. Spring 2022 STAAR EOC Algebra I
Frequency Distribution of Scale Scores
All Students**



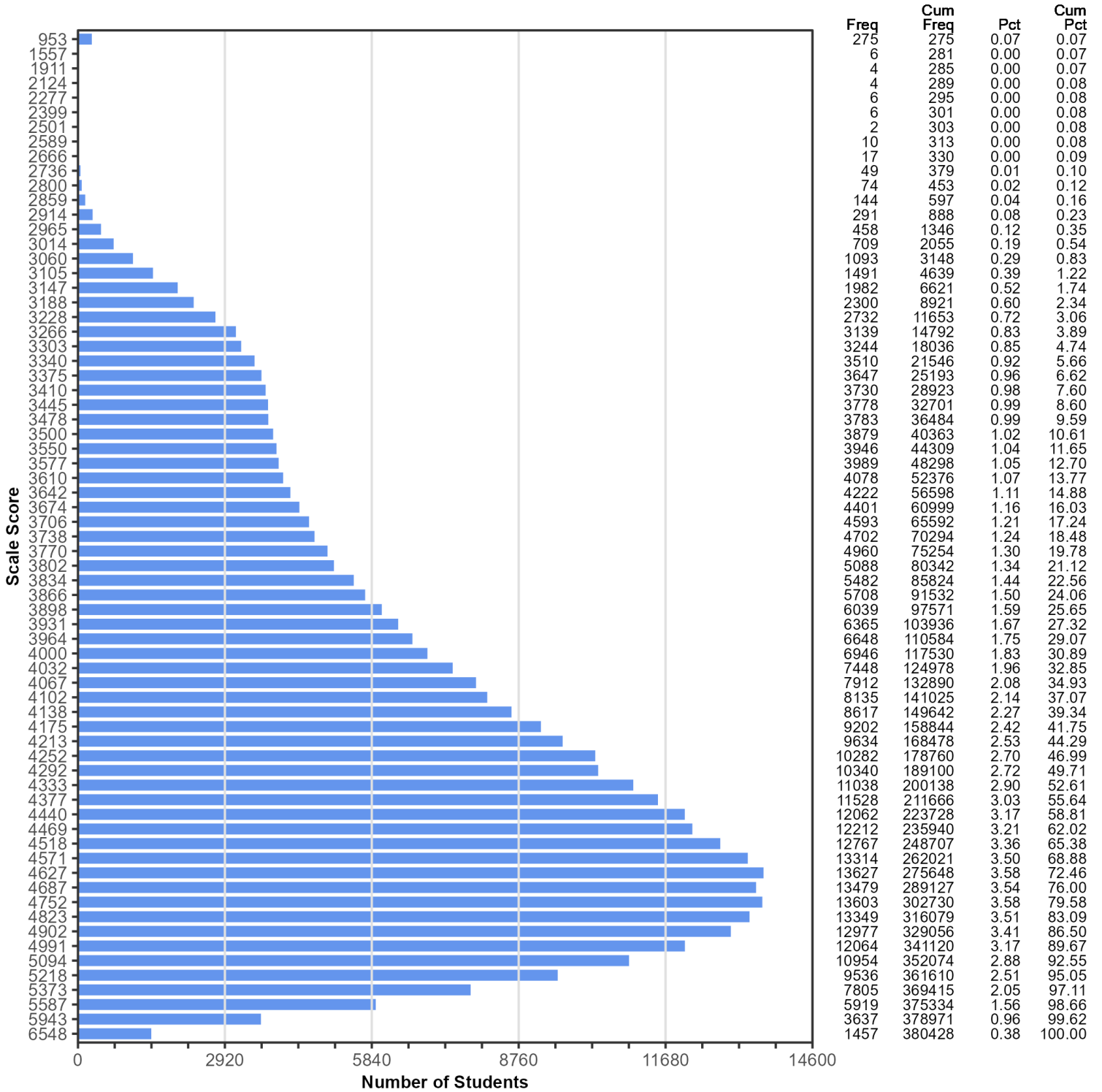
Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.28. Spring 2022 STAAR EOC Biology
Frequency Distribution of Scale Scores
All Students**



Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.

**Figure B.7.29. Spring 2022 STAAR EOC U.S. History
Frequency Distribution of Scale Scores
All Students**



Note: Students who took the Braille, ASL, or the paper STAAR with Content Language Supports version of the test are not included in the frequency distribution tables.