

**2020 TELPAS
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 Appendix D ("2020 TELPAS Score Distributions and Statistics by Content Area and Grade"). 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% of the scores) from the score at the 3rd quartile (the point that splits the highest 25% 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 that 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 that 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 that took the assessment.

Frequency Distributions

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

Cumulative Frequency (CUM FREQ) This is the number of students that 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 that obtained the particular score point on the assessment. It is computed as: $PCT = FREQ \div N \times 100$.

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

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Table D.5.1. 2020 TELPAS Reading Scale Score Descriptive Statistics (Online only)

Subject	N	Mean	Median	Mode	Range	Interquartile		SD	Variance	Skewness	Kurtosis
						Range	Range				
Grade 2 Reading	80,073	1503.21	1501	1460	645	102	73.99	5475.06	0.56	0.73	
Grade 3 Reading	82,029	1552.24	1544	1647	881	169	122.43	14989.84	0.40	-0.02	
Grade 4 Reading	81,902	1552.86	1543	1543	901	159	112.65	12690.30	0.37	0.17	
Grade 5 Reading	79,737	1592.92	1591	1681	901	173	123.75	15314.70	0.27	0.04	
Grade 6 Reading	65,720	1547.48	1540	1509	841	119	93.32	8708.97	0.47	0.71	
Grade 7 Reading	61,735	1555.07	1551	1561	841	132	98.71	9744.43	0.45	0.56	
Grade 8 Reading	52,949	1549.27	1542	1524	712	109	81.49	6640.96	0.50	0.49	
Grade 9 Reading	54,270	1536.14	1533	1471	712	117	83.52	6975.51	0.49	0.51	
Grade 10 Reading	39,376	1523.54	1513	1513	669	115	82.32	6776.24	0.56	0.71	
Grade 11 Reading	27,758	1531.08	1522	1530	669	107	82.00	6724.07	0.57	0.69	
Grade 12 Reading	21,867	1528.10	1522	1505	669	107	79.04	6247.37	0.61	0.85	

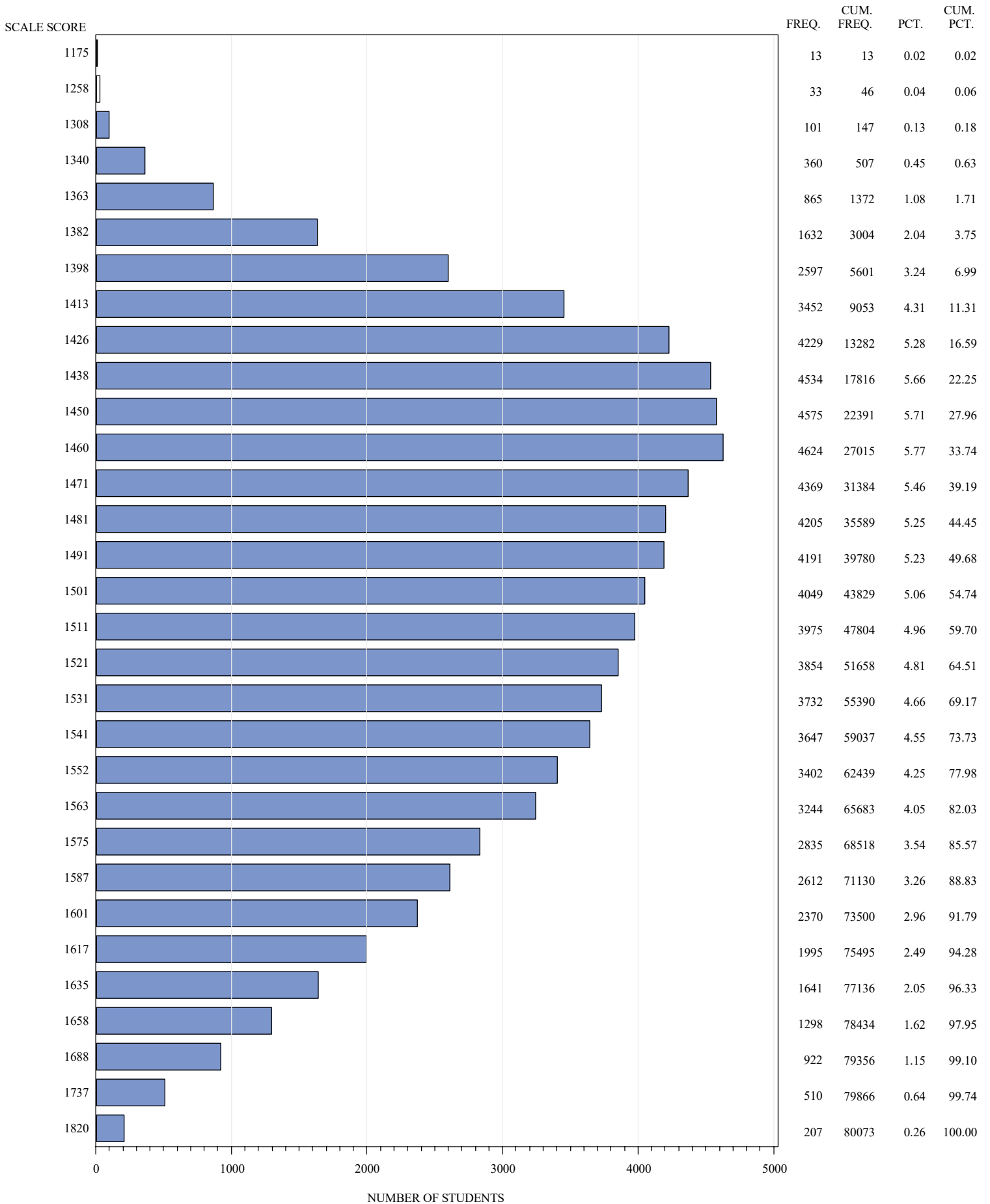
Table D.5.2. 2020 TELPAS Listening Scale Score Descriptive Statistics (Online only)

Subject	N	Mean	Median	Mode	Range	Interquartile		SD	Variance	Skewness	Kurtosis
						Range	Range				
Grade 2 Listening	72,303	1564.65	1568	1583	663	99	82.26	6767.24	0.22	0.49	
Grade 3 Listening	74,408	1616.33	1616	1661	663	106	90.90	8262.61	0.04	0.23	
Grade 4 Listening	75,651	1547.46	1544	1570	608	85	74.86	5604.37	0.47	0.81	
Grade 5 Listening	74,395	1574.96	1570	1619	608	98	82.41	6791.47	0.33	0.43	
Grade 6 Listening	59,580	1587.53	1590	1624	673	111	82.84	6861.97	0.00	0.59	
Grade 7 Listening	55,069	1601.01	1606	1645	673	123	90.70	8226.25	-0.03	0.41	
Grade 8 Listening	47,515	1614.34	1624	1670	673	110	95.27	9075.70	-0.14	0.23	
Grade 9 Listening	51,983	1539.97	1538	1601	517	120	79.04	6247.44	0.10	-0.04	
Grade 10 Listening	37,259	1551.74	1548	1601	517	101	78.05	6091.04	0.12	-0.04	
Grade 11 Listening	25,907	1556.58	1559	1601	517	101	76.13	5795.49	0.11	0.08	
Grade 12 Listening	20,375	1553.61	1548	1601	517	101	73.66	5426.19	0.19	0.14	

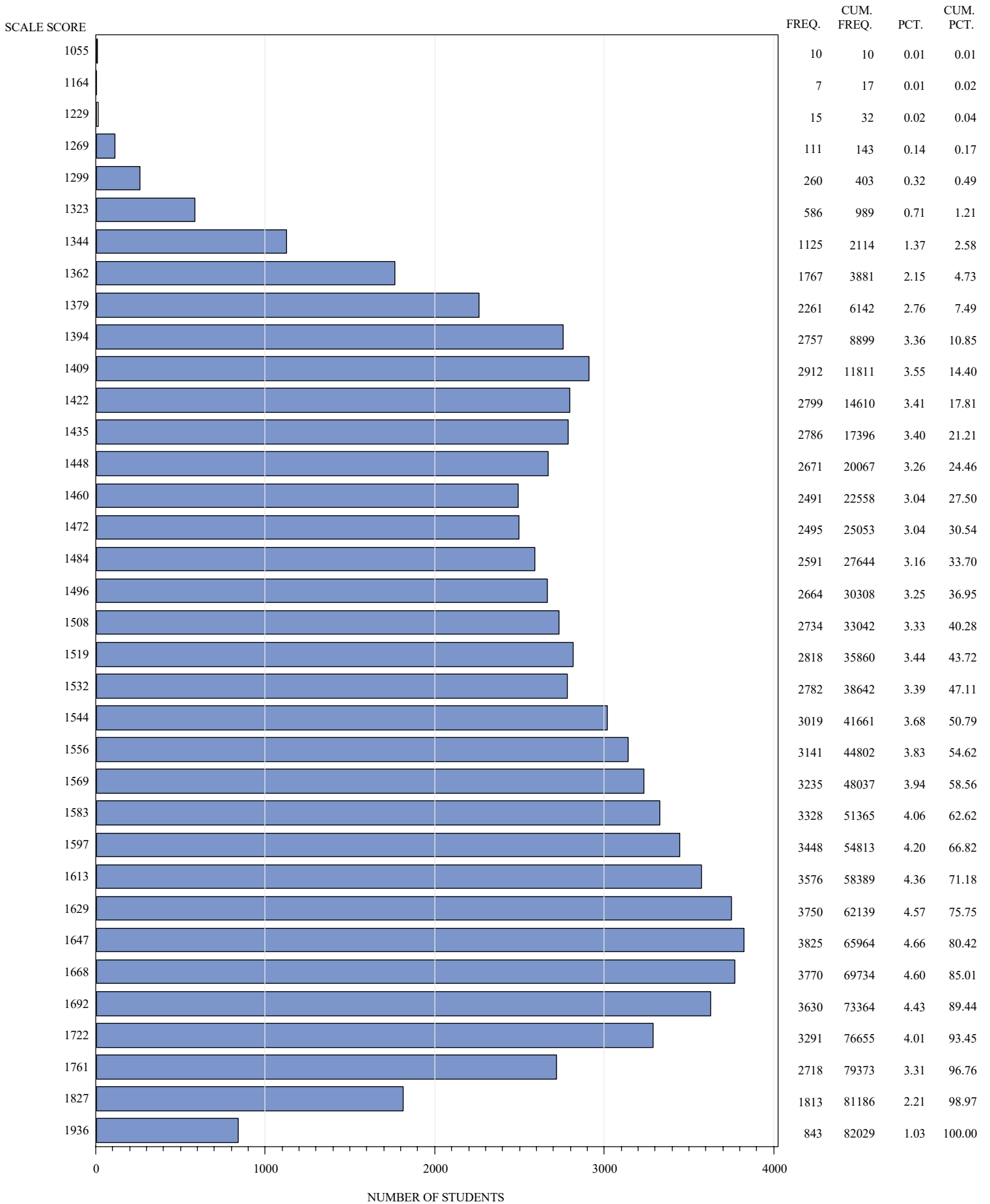
Table D.5.3. 2020 TELPAS Speaking Scale Score Descriptive Statistics (Online only)

Subject	N	Mean	Median	Mode	Range	Interquartile		SD	Variance	Skewness	Kurtosis
						Range	Range				
Grade 2 Speaking	72,303	1484.12	1491	1522	513	111	86.84	7541.68	-0.23	0.40	
Grade 3 Speaking	74,408	1517.65	1522	1560	513	116	88.30	7797.44	-0.34	0.54	
Grade 4 Speaking	75,651	1535.57	1535	1551	364	67	52.92	2800.54	-0.37	0.80	
Grade 5 Speaking	74,395	1538.33	1535	1551	364	83	56.20	3158.46	-0.32	0.50	
Grade 6 Speaking	59,580	1518.75	1516	1540	280	72	50.47	2547.10	0.04	-0.02	
Grade 7 Speaking	55,069	1512.44	1508	1540	280	61	52.10	2714.38	0.06	-0.04	
Grade 8 Speaking	47,515	1512.10	1508	1540	280	77	54.75	2997.63	0.07	-0.13	
Grade 9 Speaking	51,983	1496.73	1500	1399	292	82	62.27	3877.74	0.10	-0.42	
Grade 10 Speaking	37,259	1502.93	1505	1399	292	82	64.85	4205.91	0.05	-0.49	
Grade 11 Speaking	25,907	1507.35	1511	1399	292	94	65.82	4331.85	0.01	-0.48	
Grade 12 Speaking	20,375	1507.44	1511	1399	292	94	66.93	4479.39	0.01	-0.51	

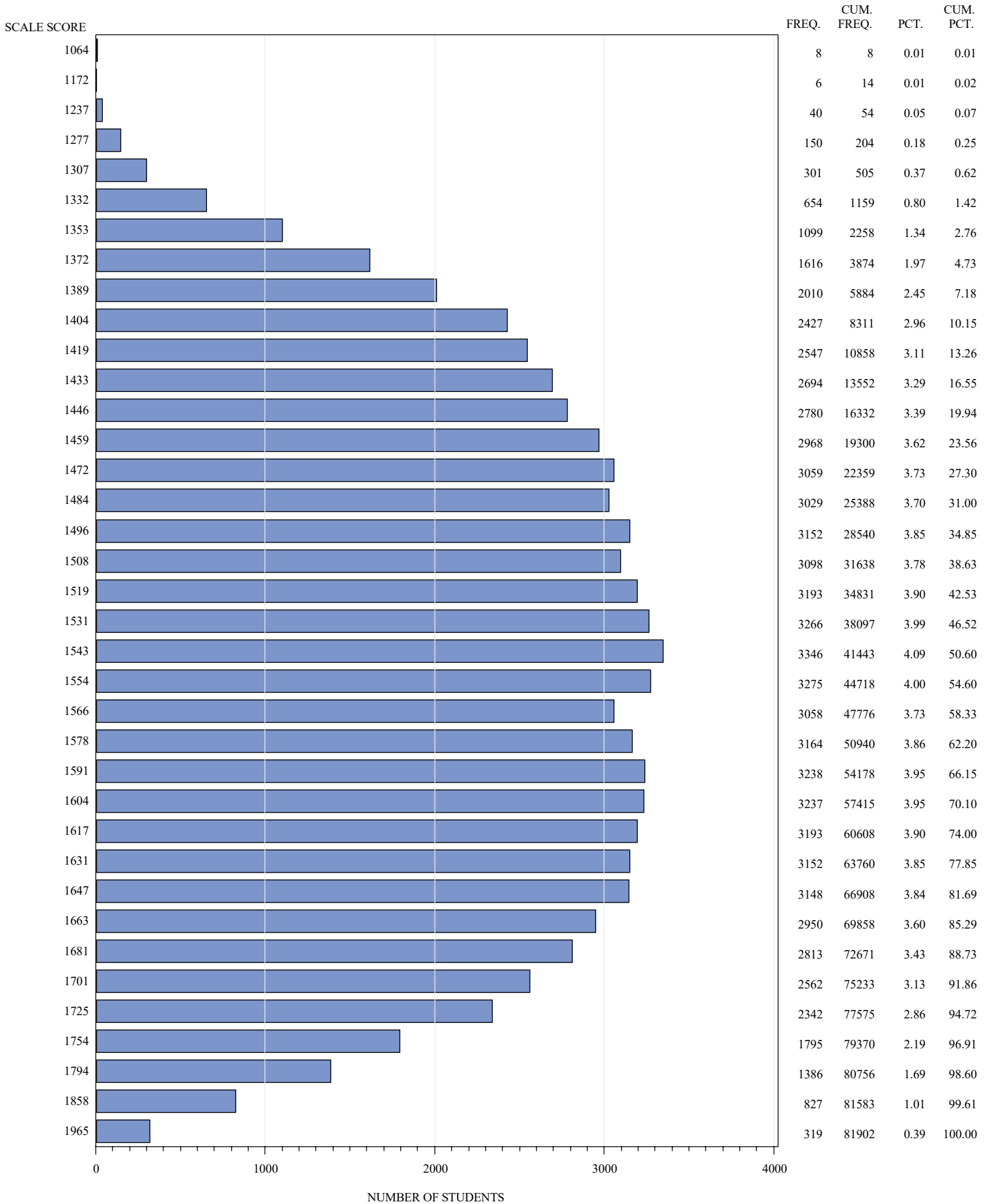
**Figure D.5.1 2020 TELPAS Grade 2 Reading
Frequency Distribution of Scale Scores
Online Students**



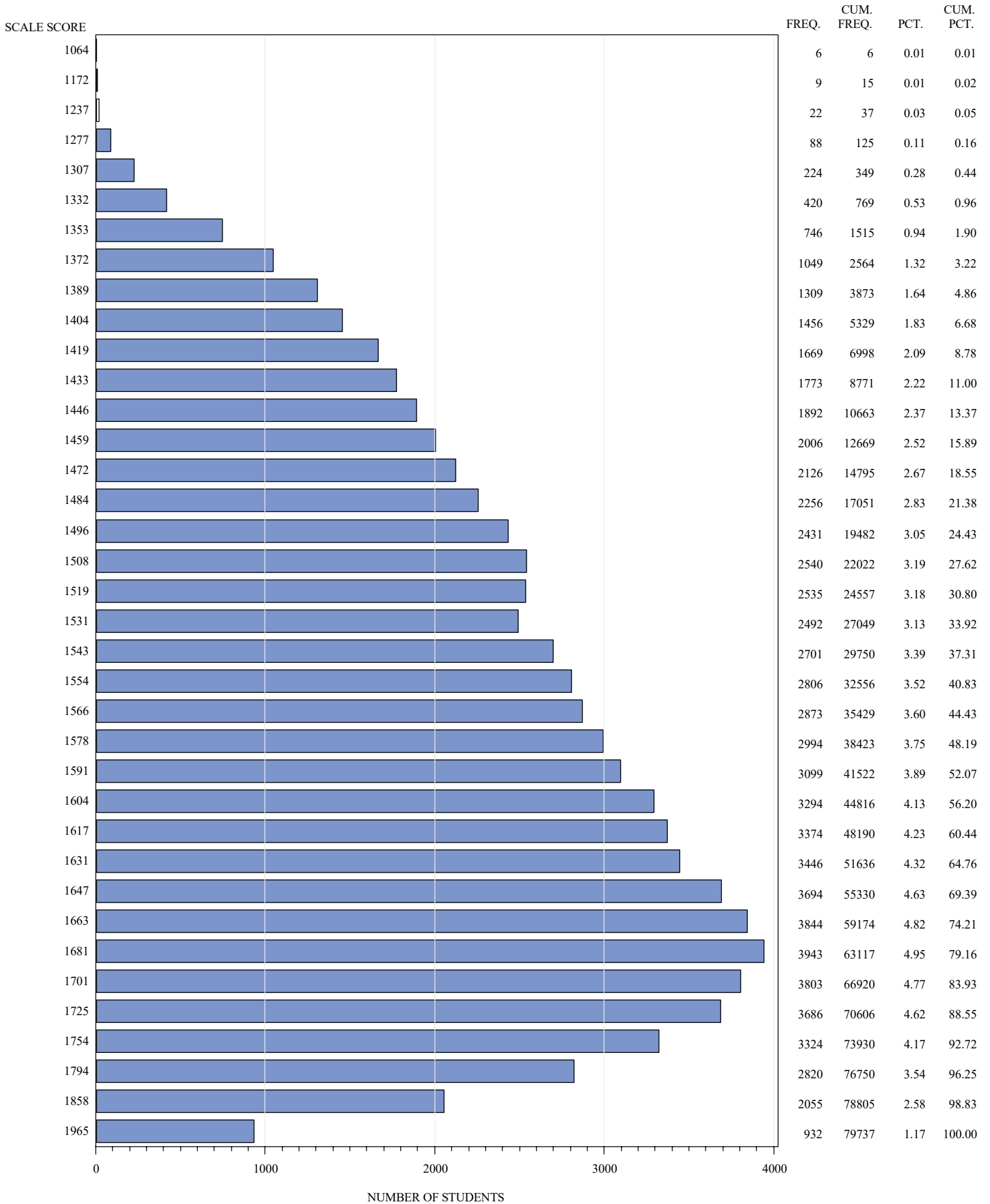
**Figure D.5.2 2020 TELPAS Grade 3 Reading
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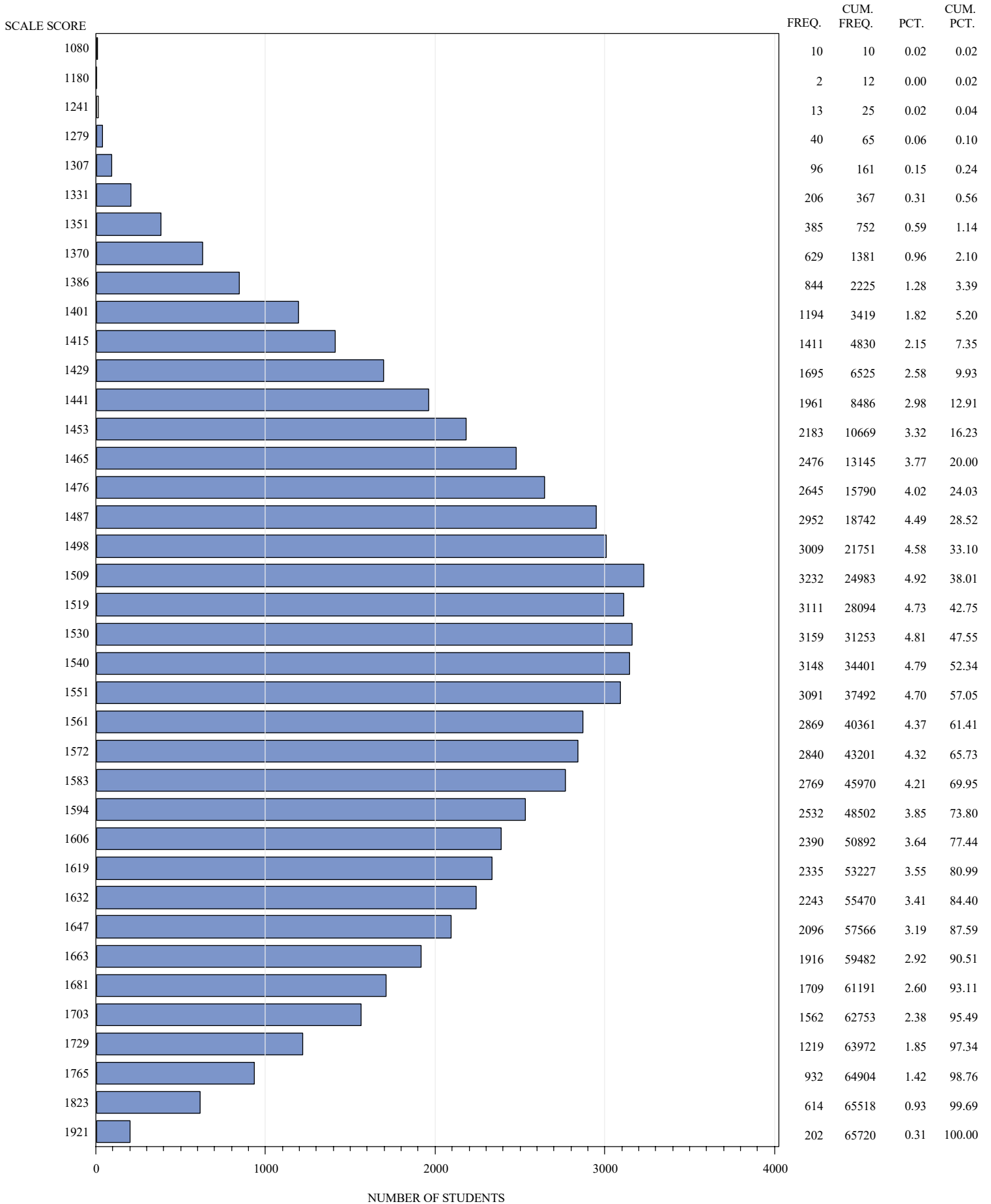
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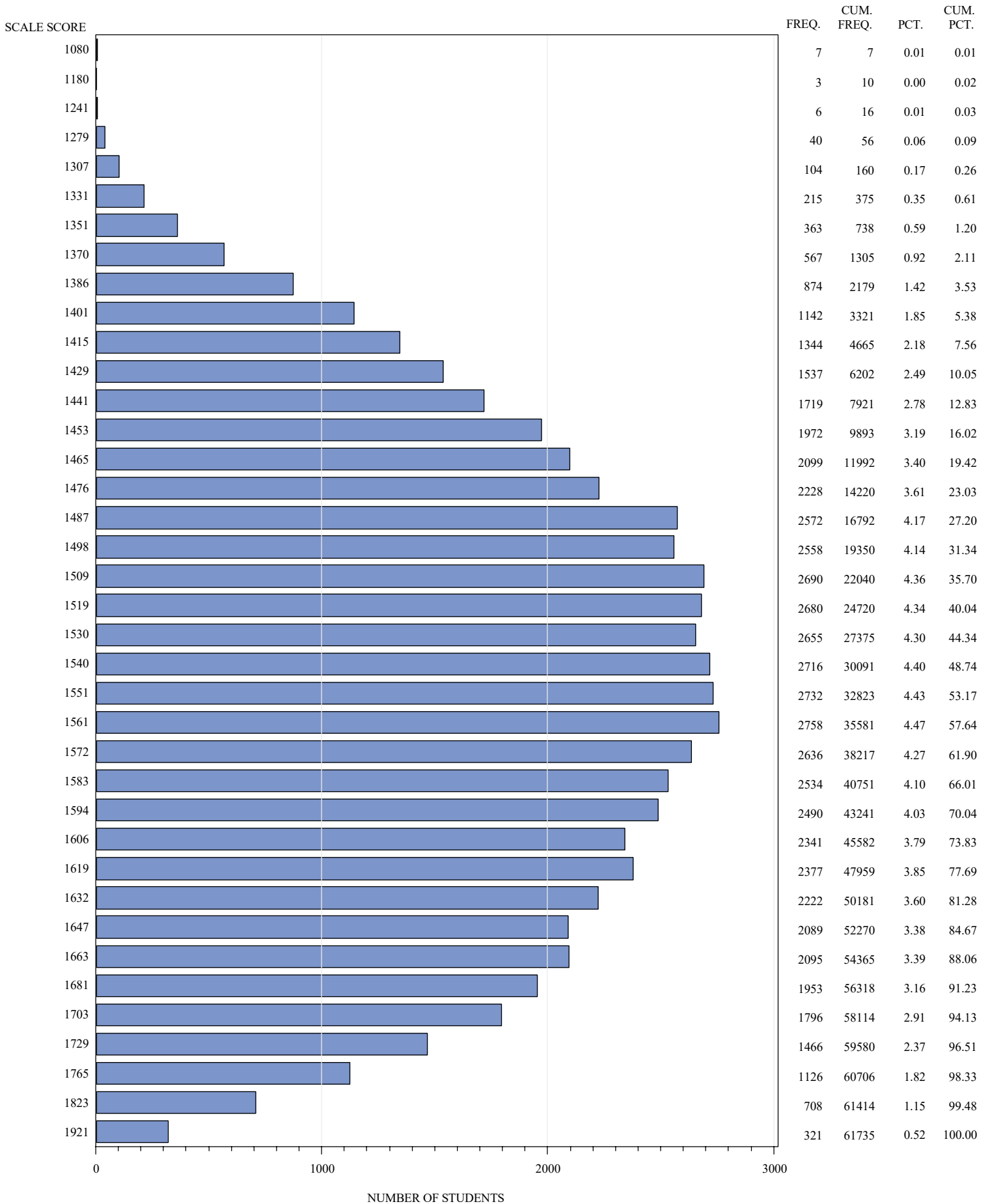
**Figure D.5.4 2020 TELPAS Grade 5 Reading
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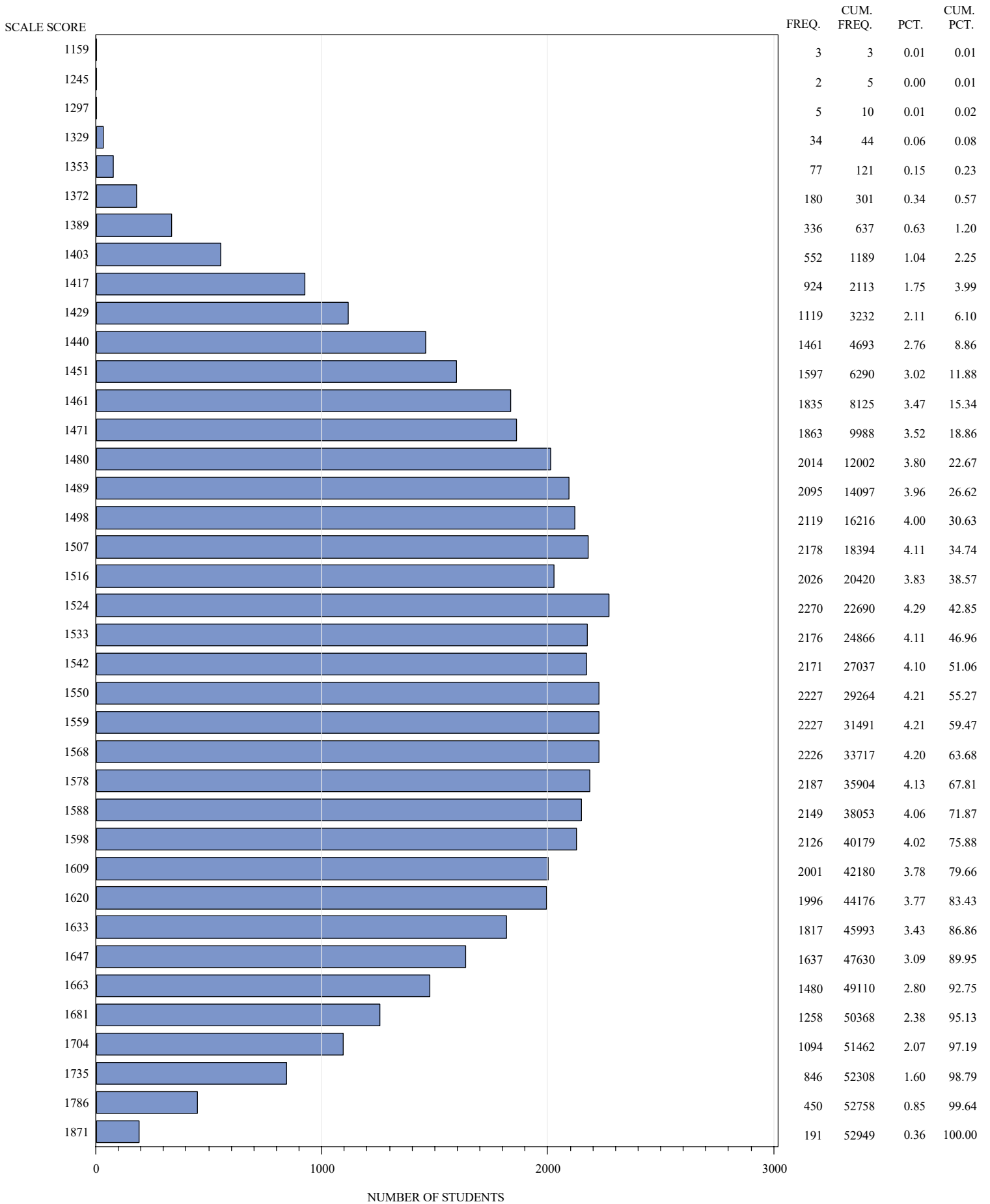
**Figure D.5.5 2020 TELPAS Grade 6 Reading
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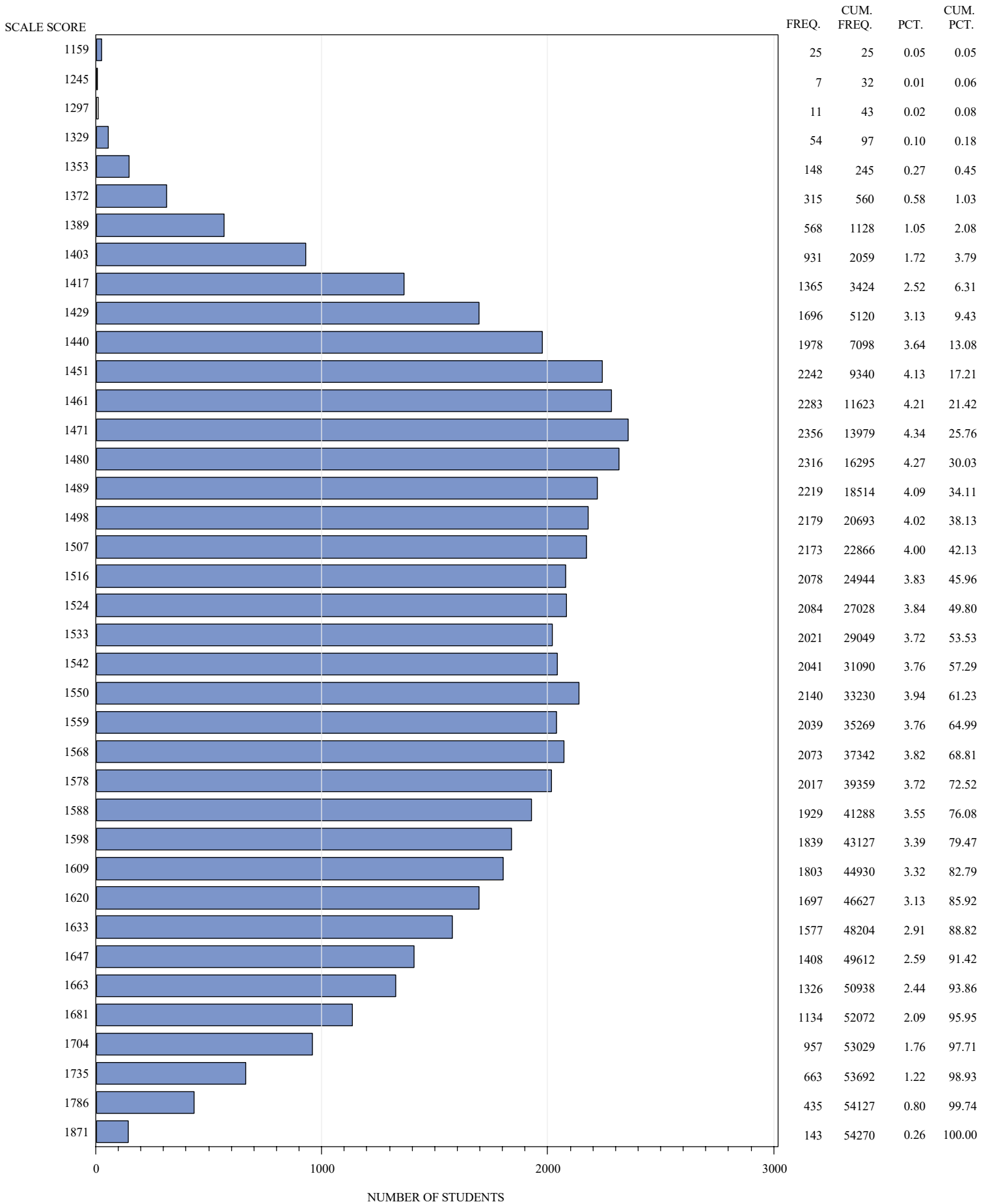
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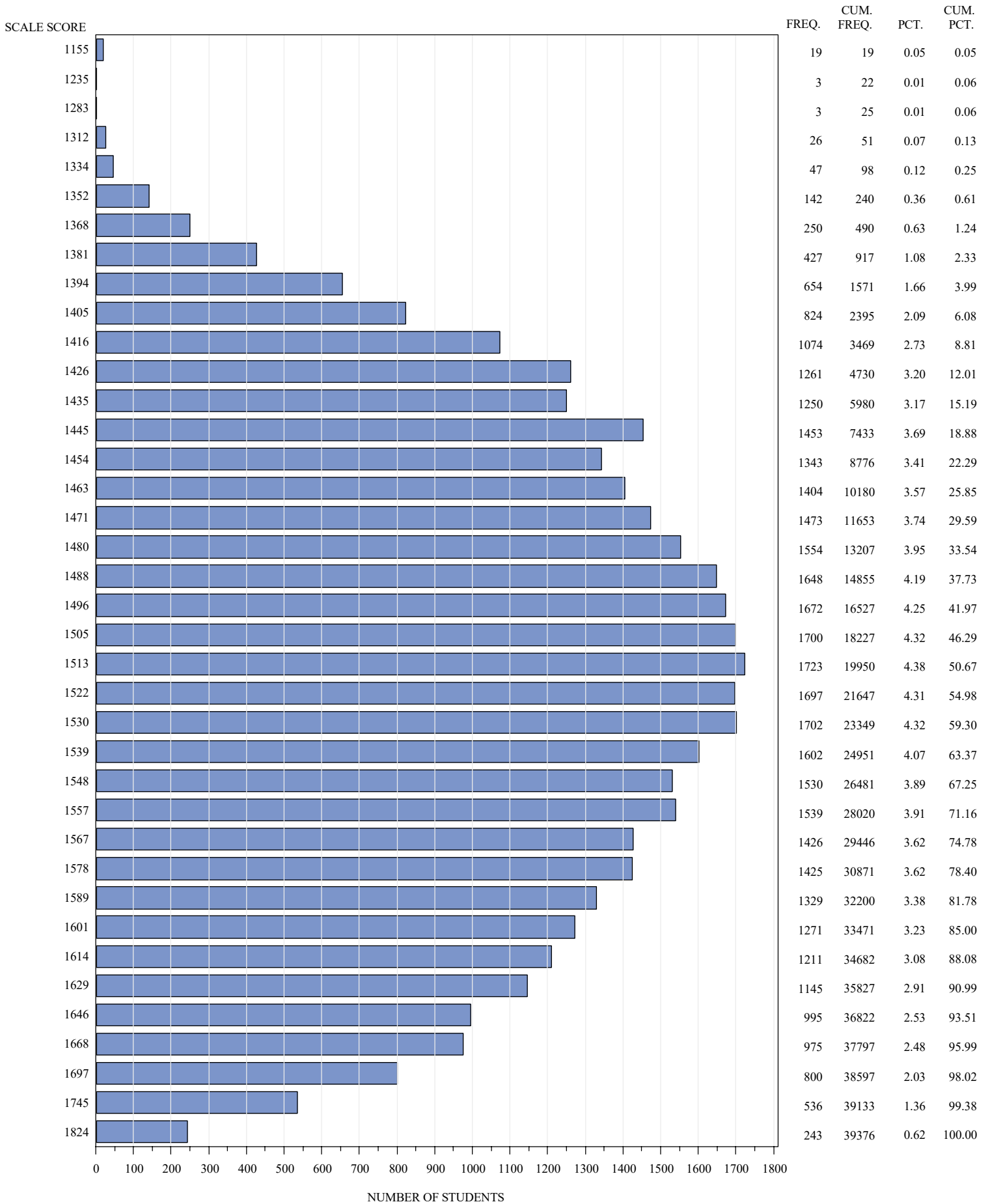
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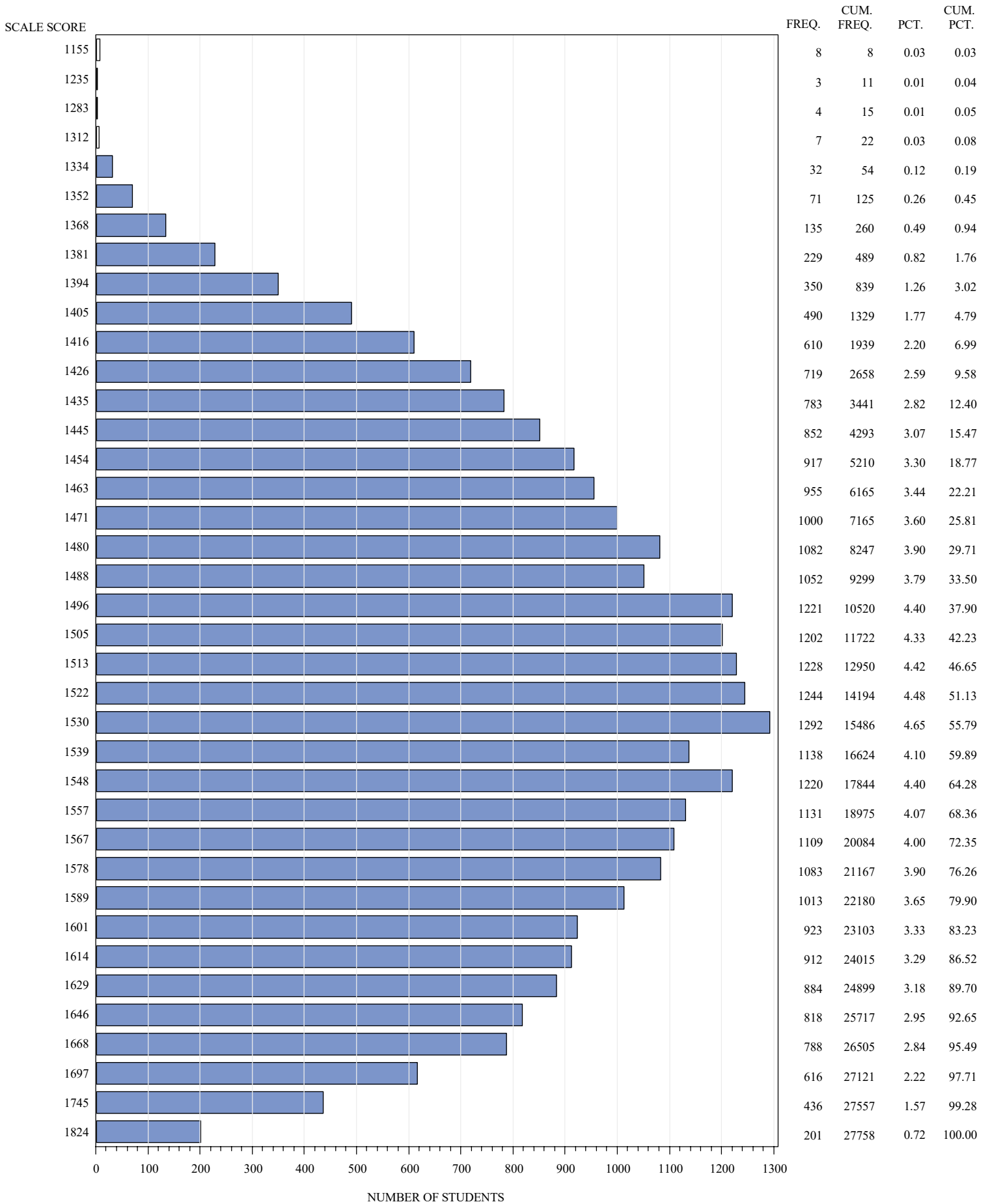
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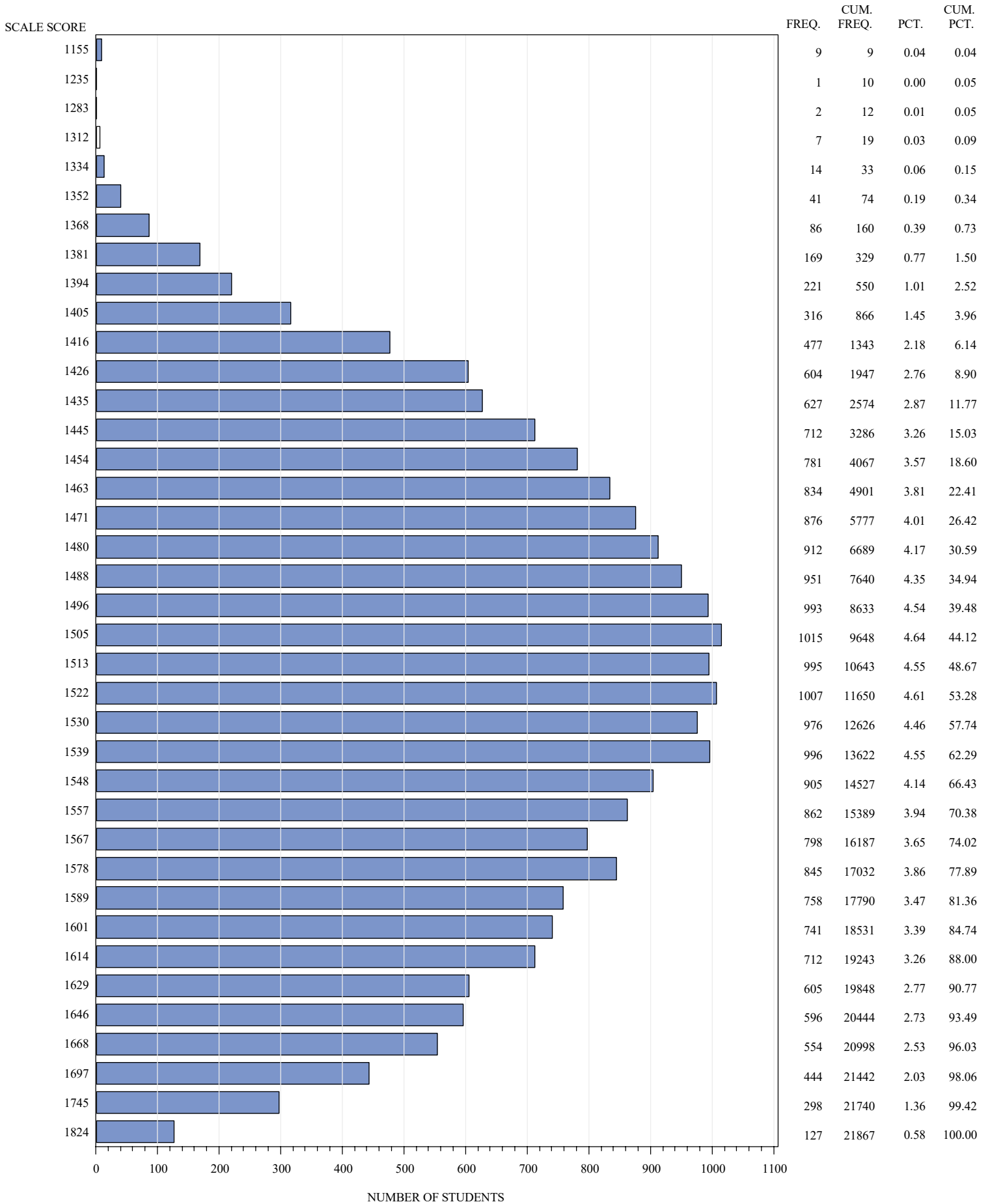
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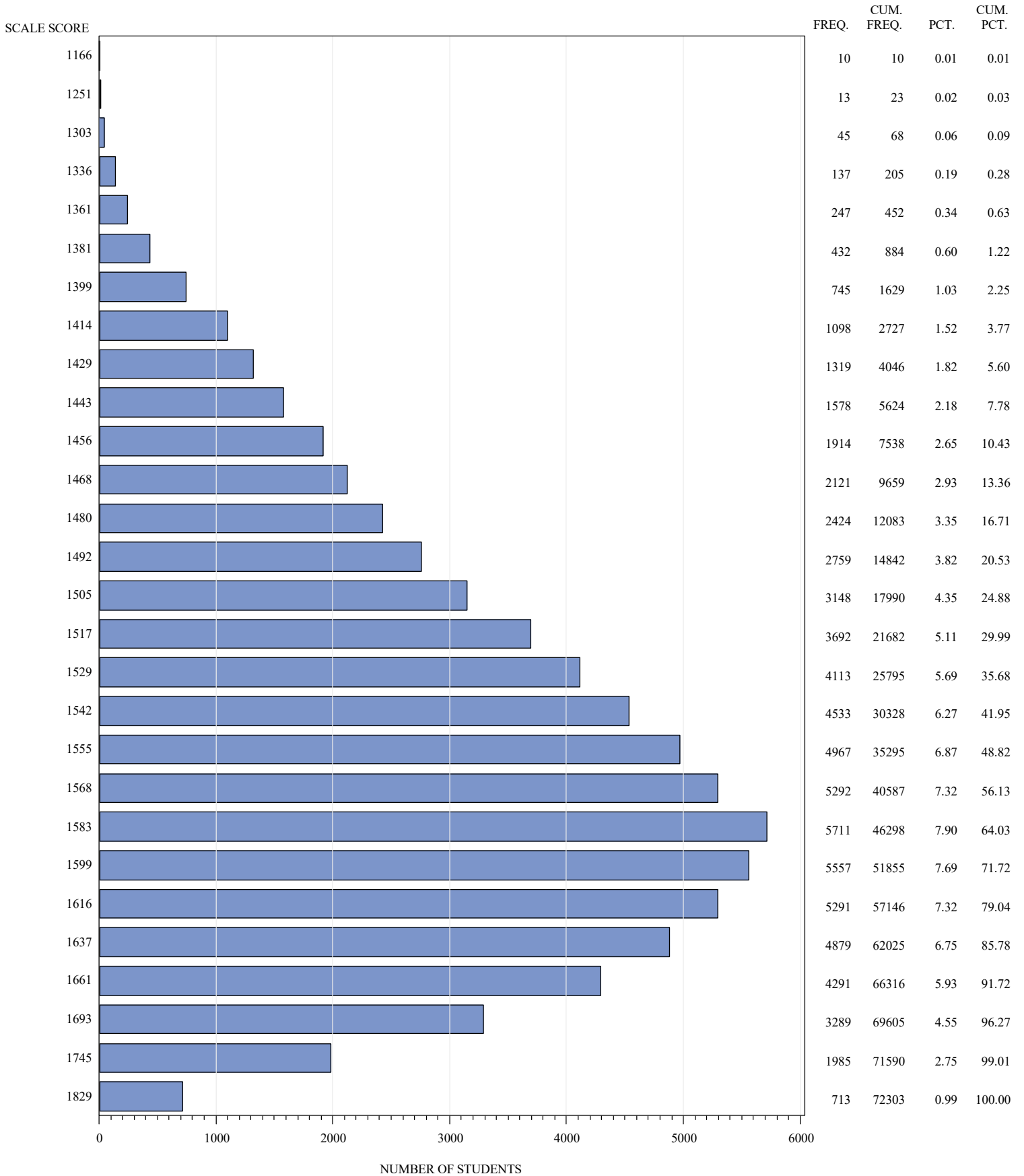
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**Figure D.5.11 2020 TELPAS Grade 12 Reading
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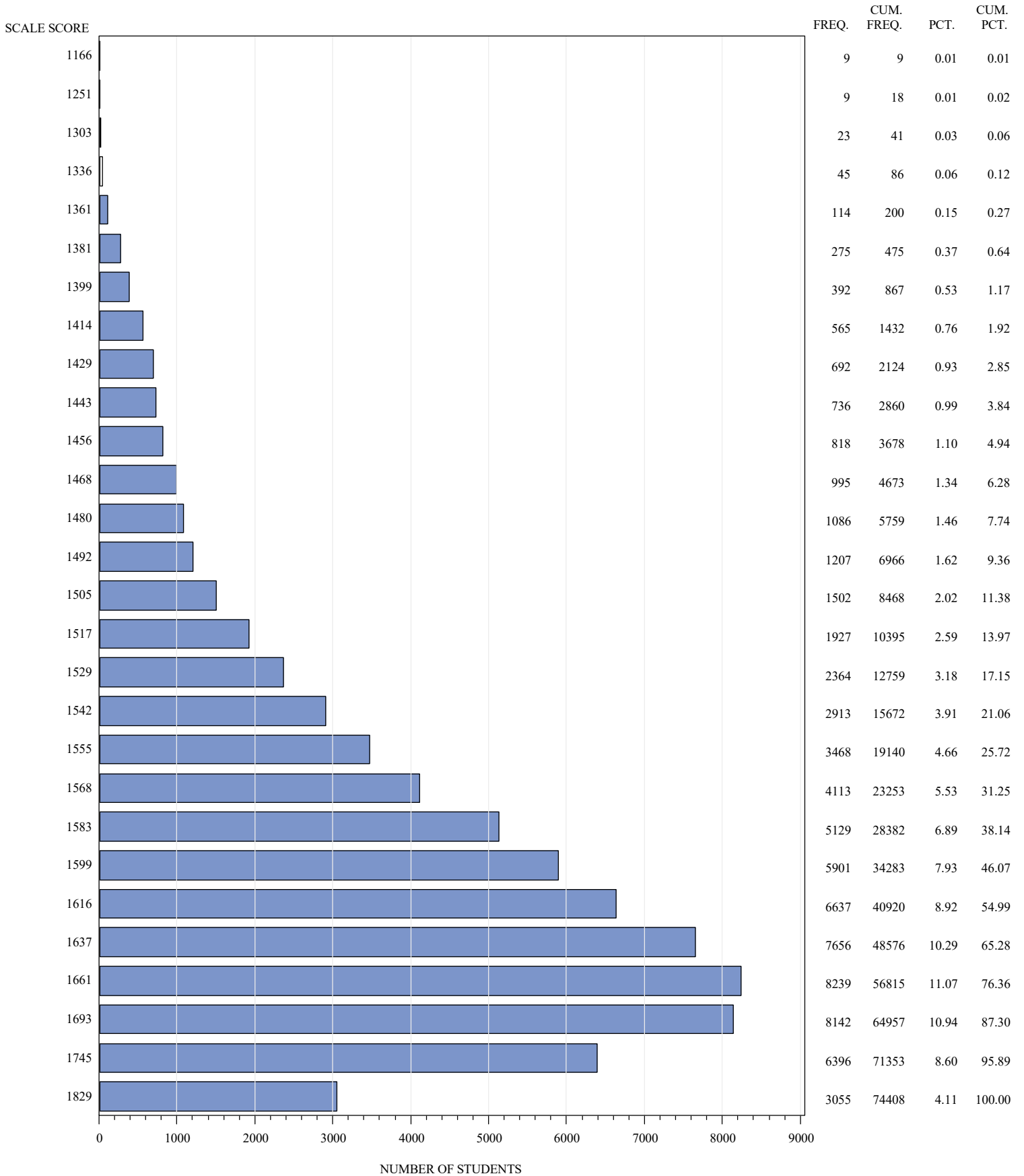
**Figure D.5.12 2020 TELPAS Grade 2 Listening
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Online Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

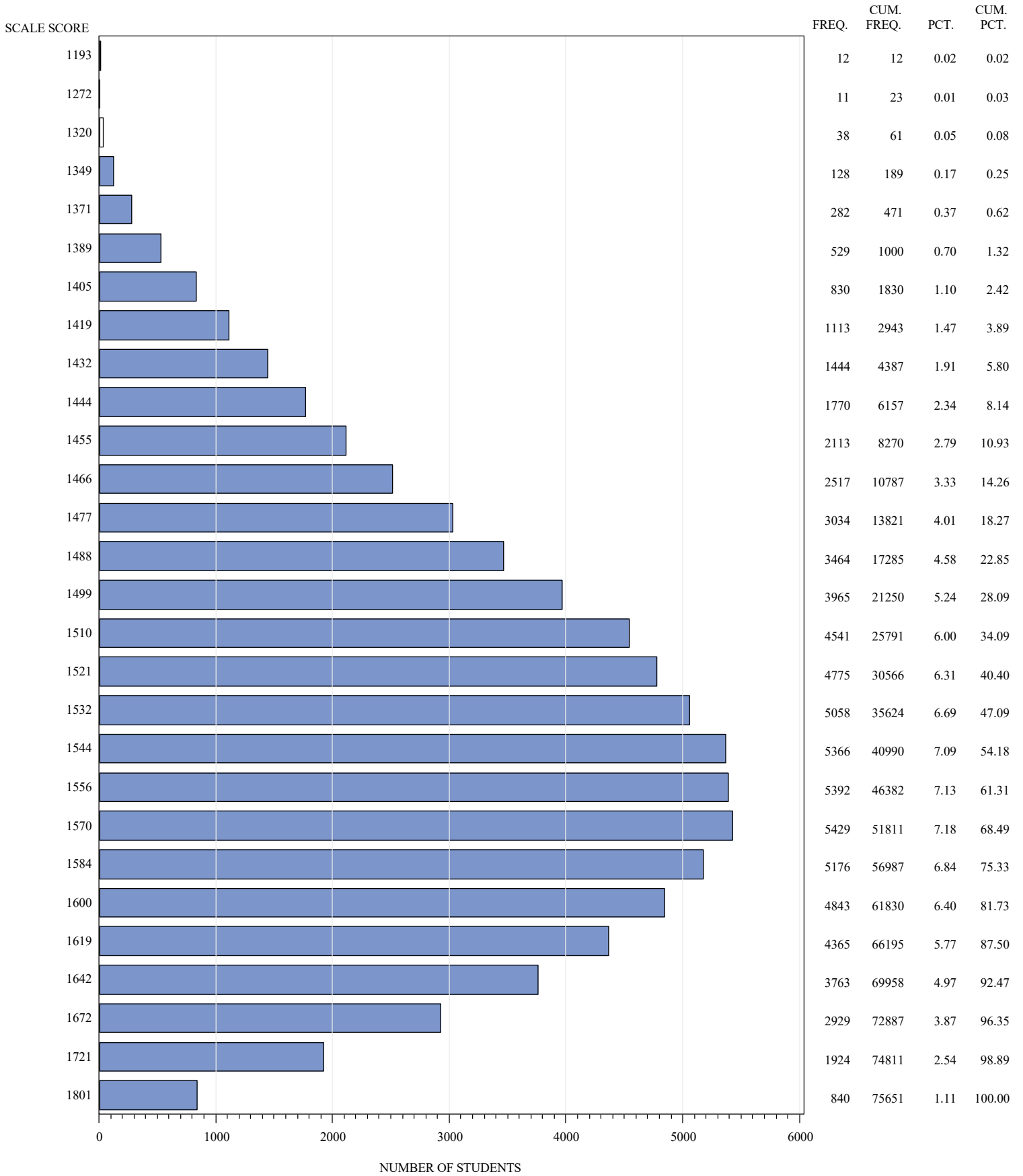
**Figure D.5.13 2020 TELPAS Grade 3 Listening
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Online Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

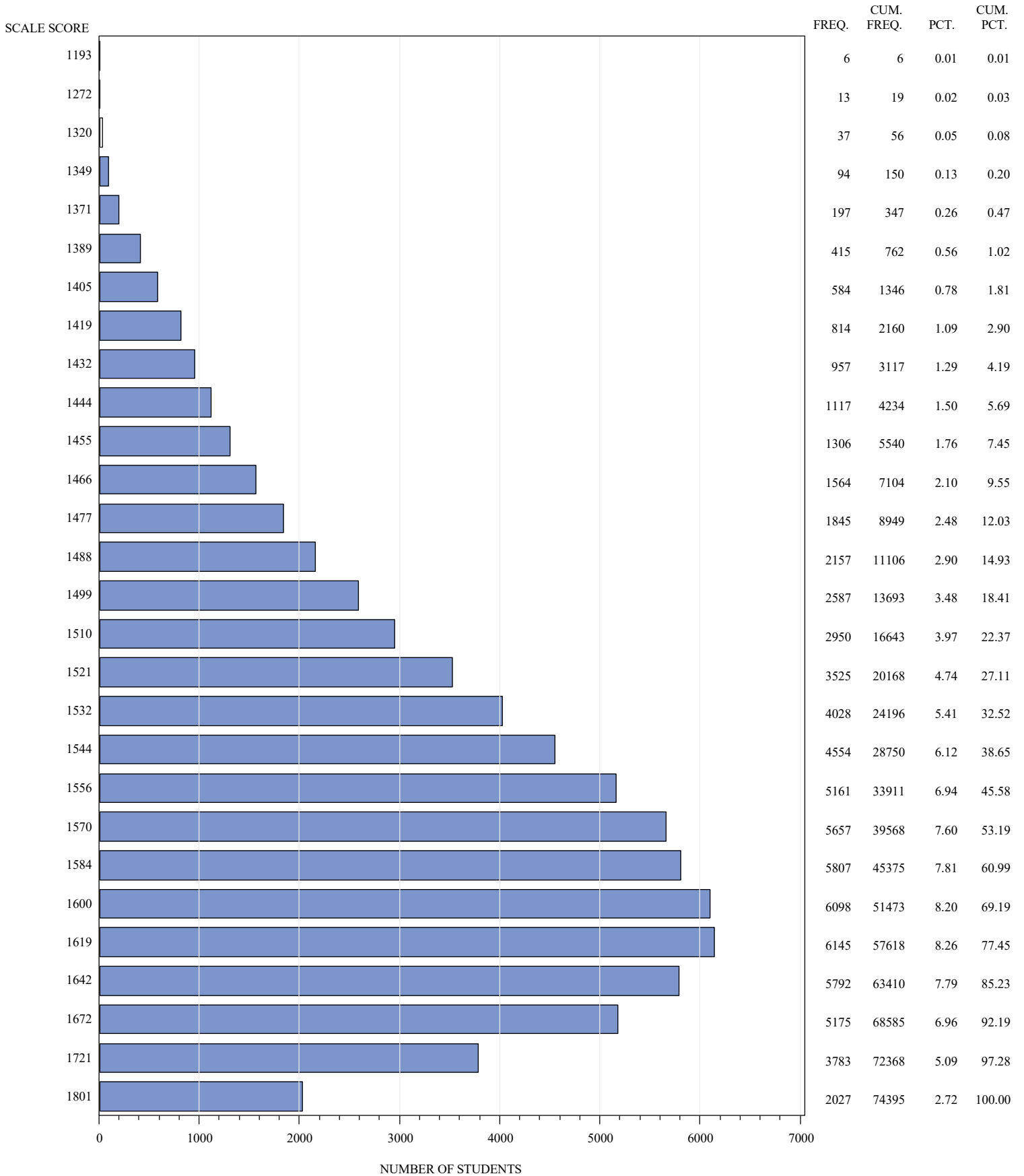
**Figure D.5.14 2020 TELPAS Grade 4 Listening
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Online Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

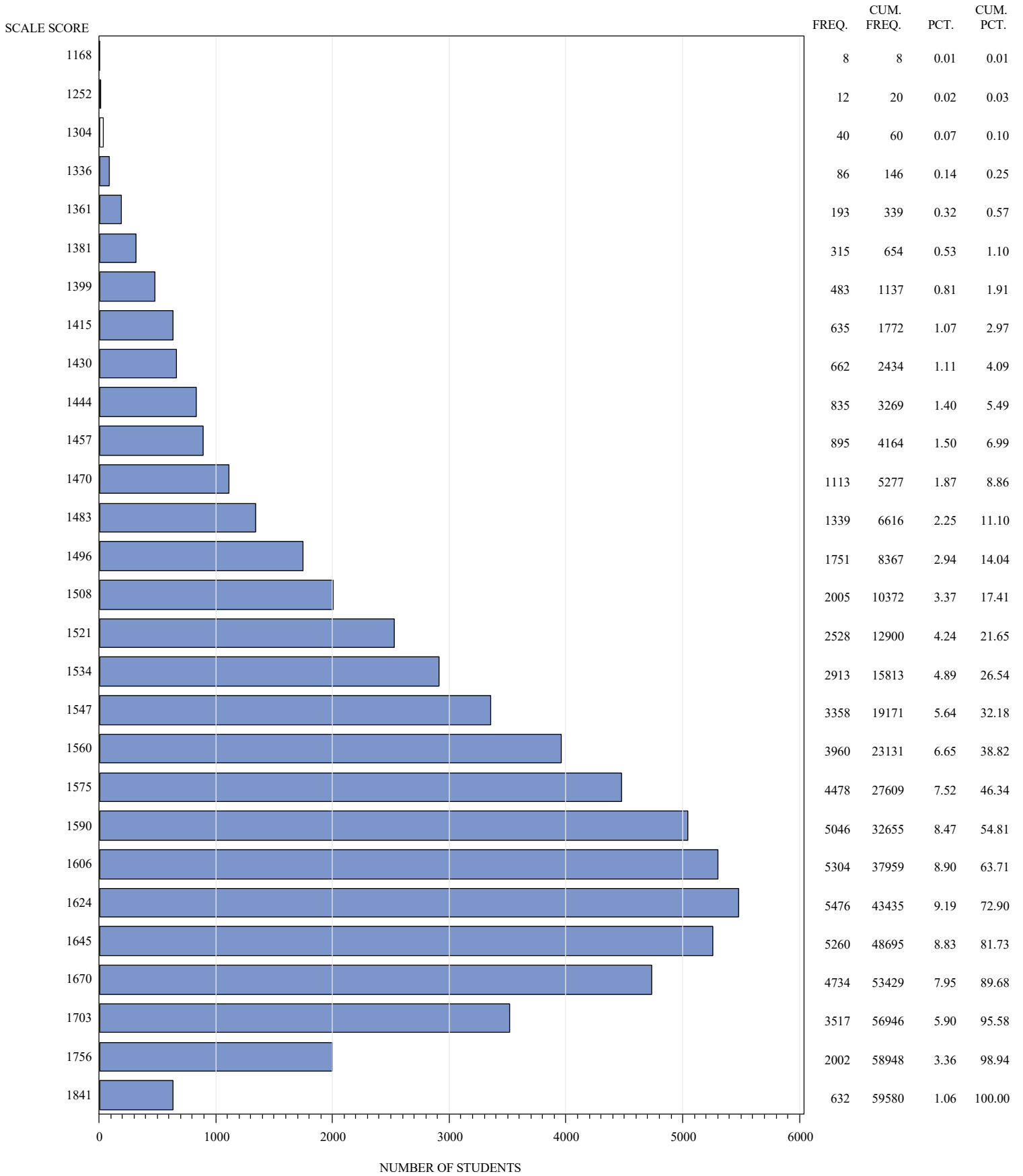
**Figure D.5.15 2020 TELPAS Grade 5 Listening
Frequency Distribution of Scale Scores
Online Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

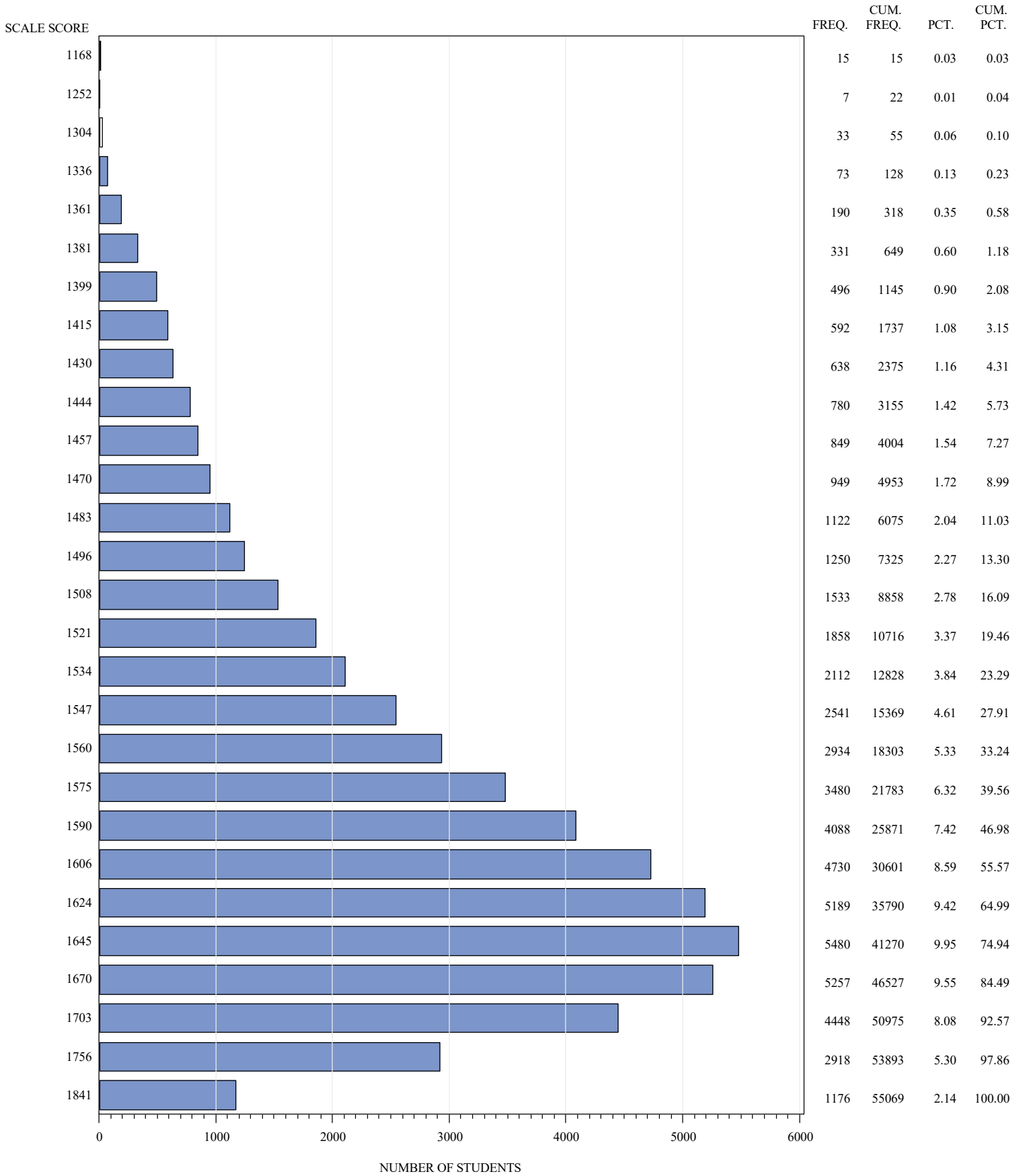
**Figure D.5.16 2020 TELPAS Grade 6 Listening
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

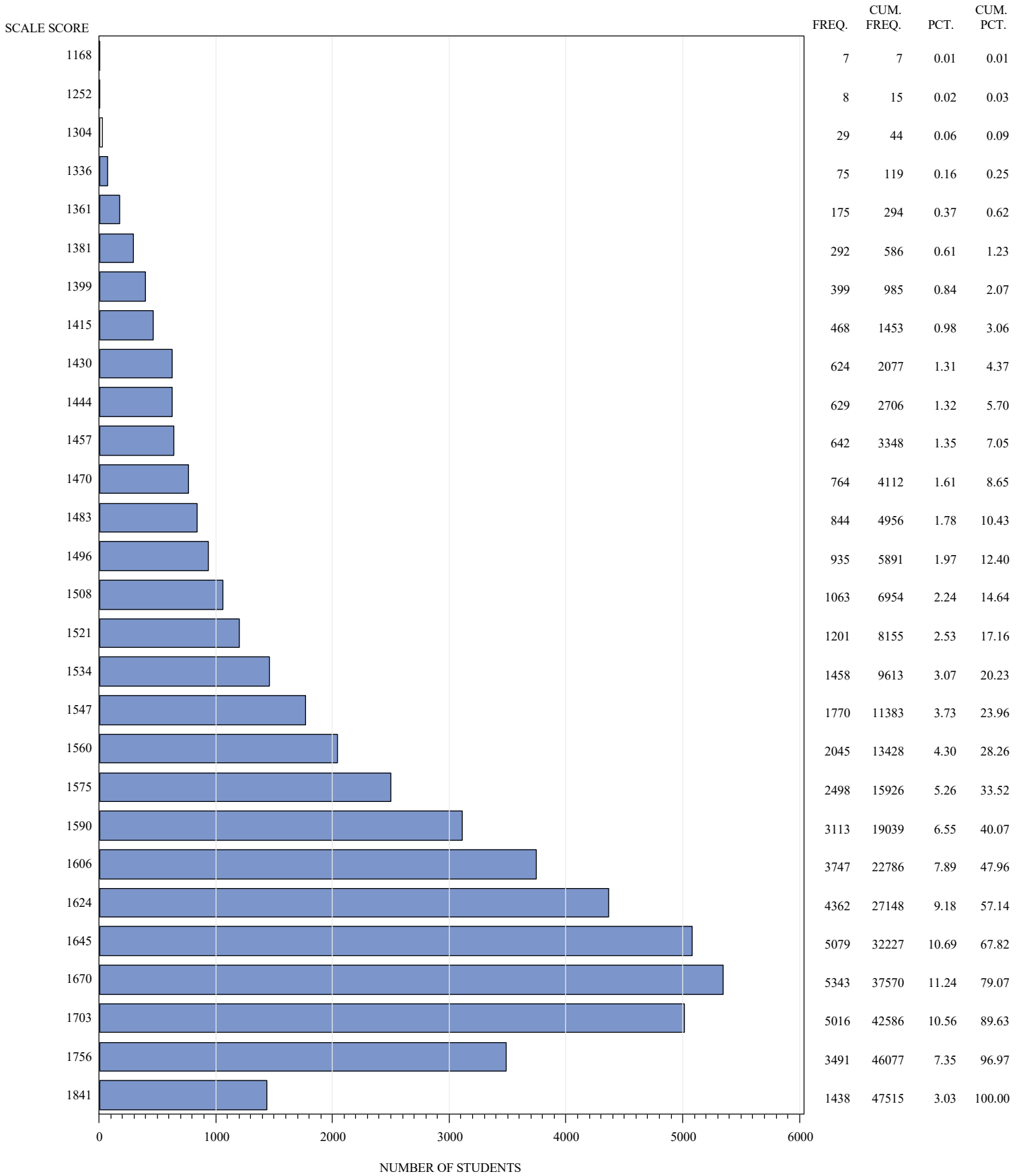
**Figure D.5.17 2020 TELPAS Grade 7 Listening
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Online Students**



Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

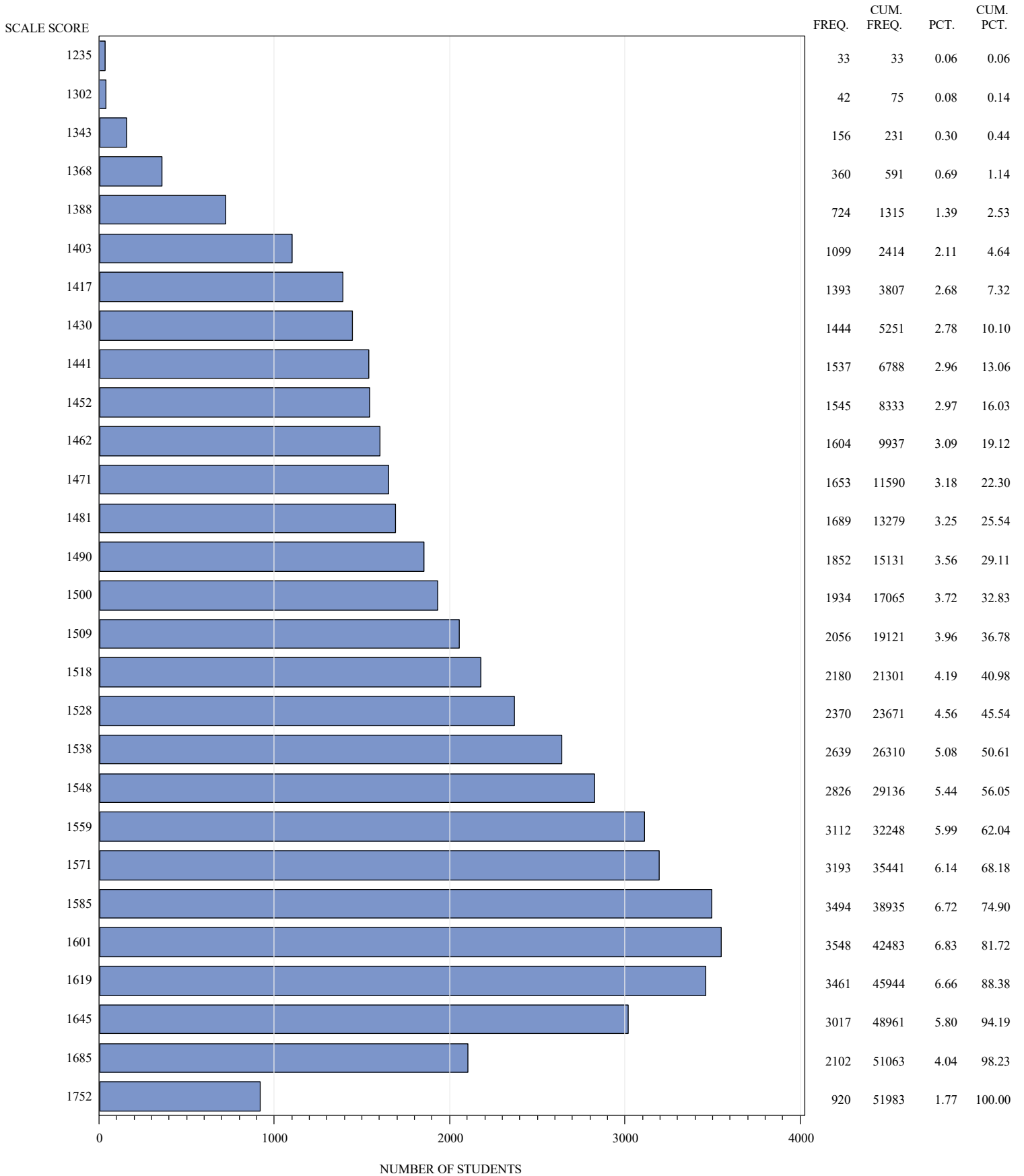
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

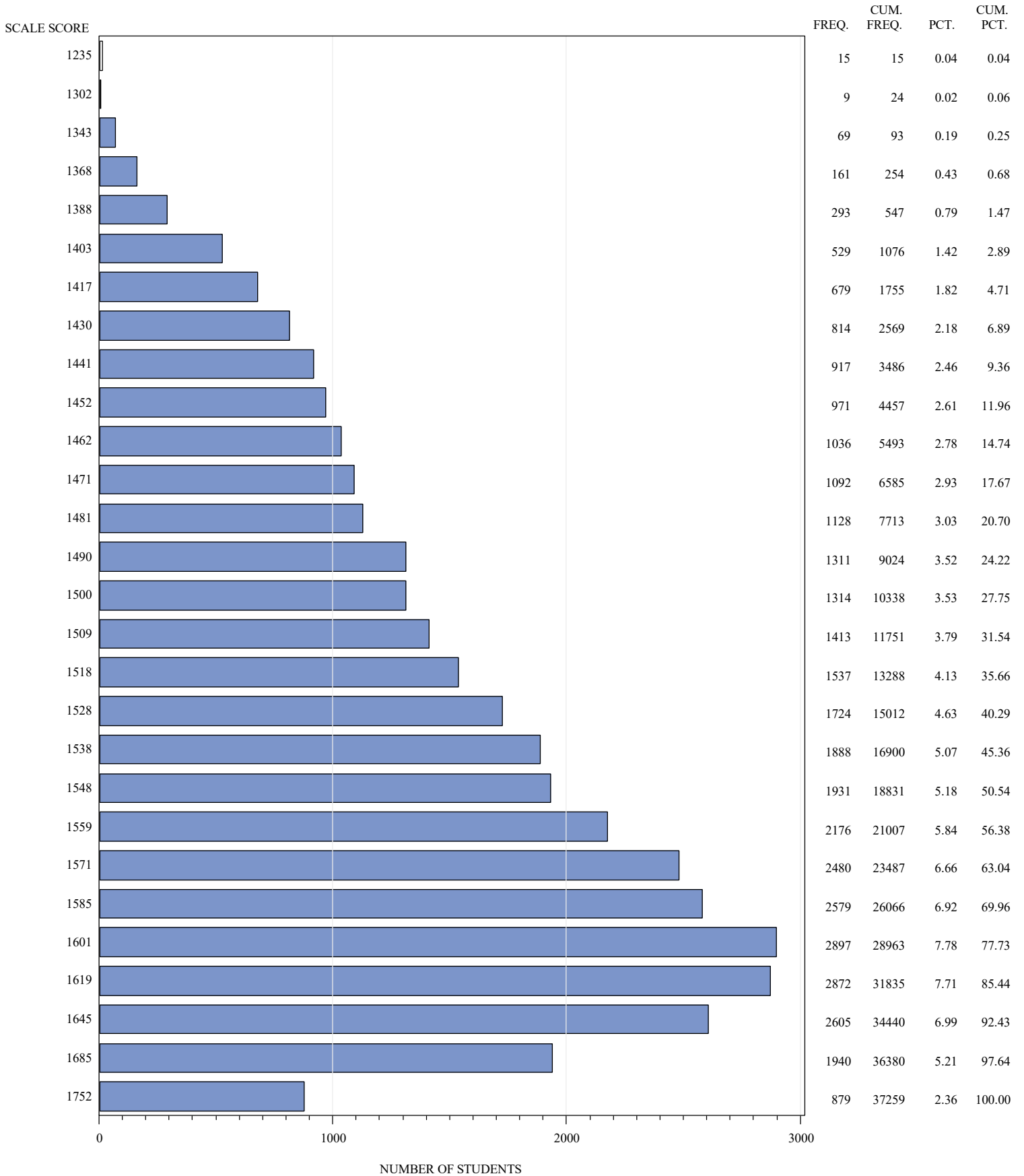
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

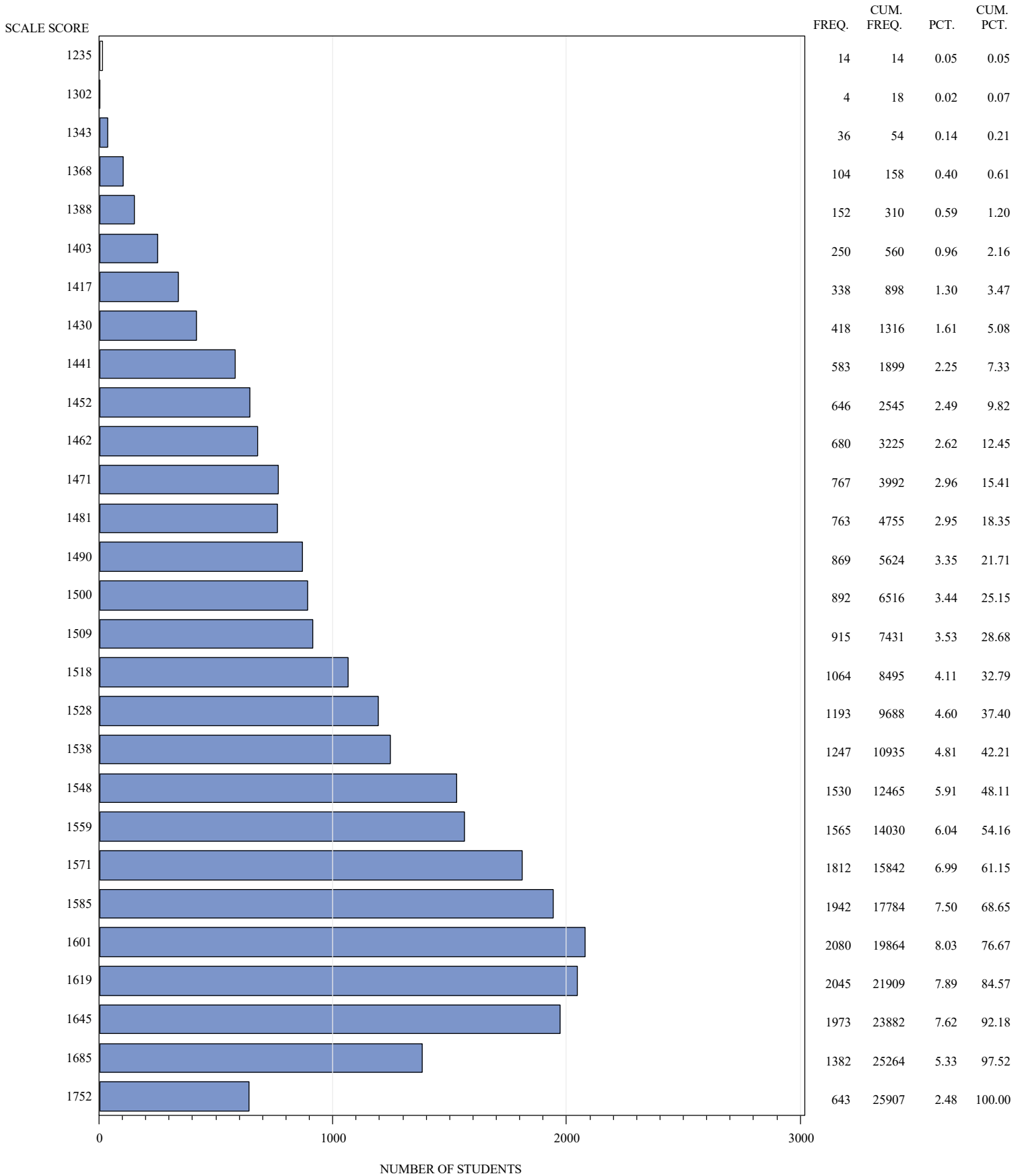
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

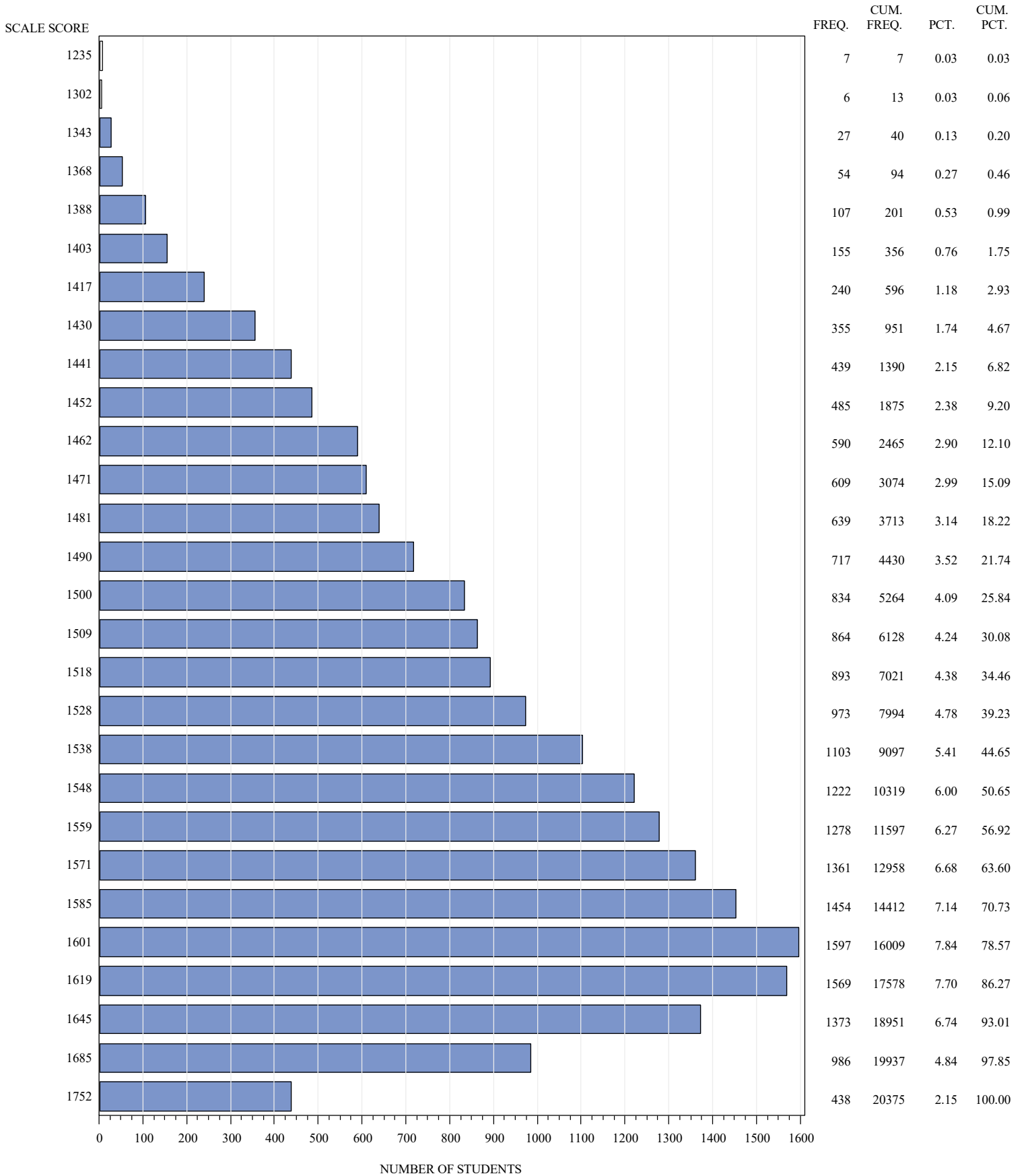
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Notes:

Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

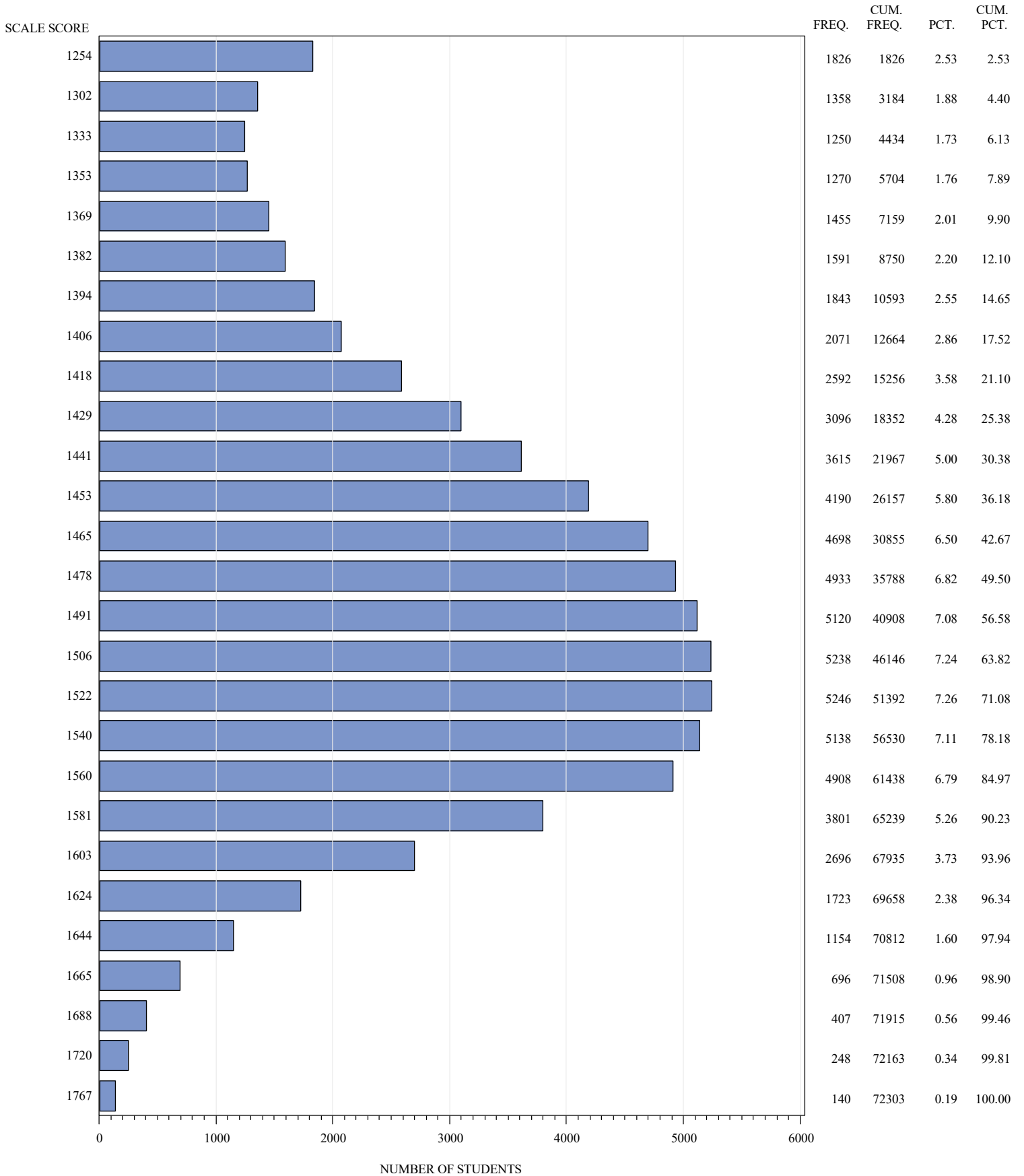
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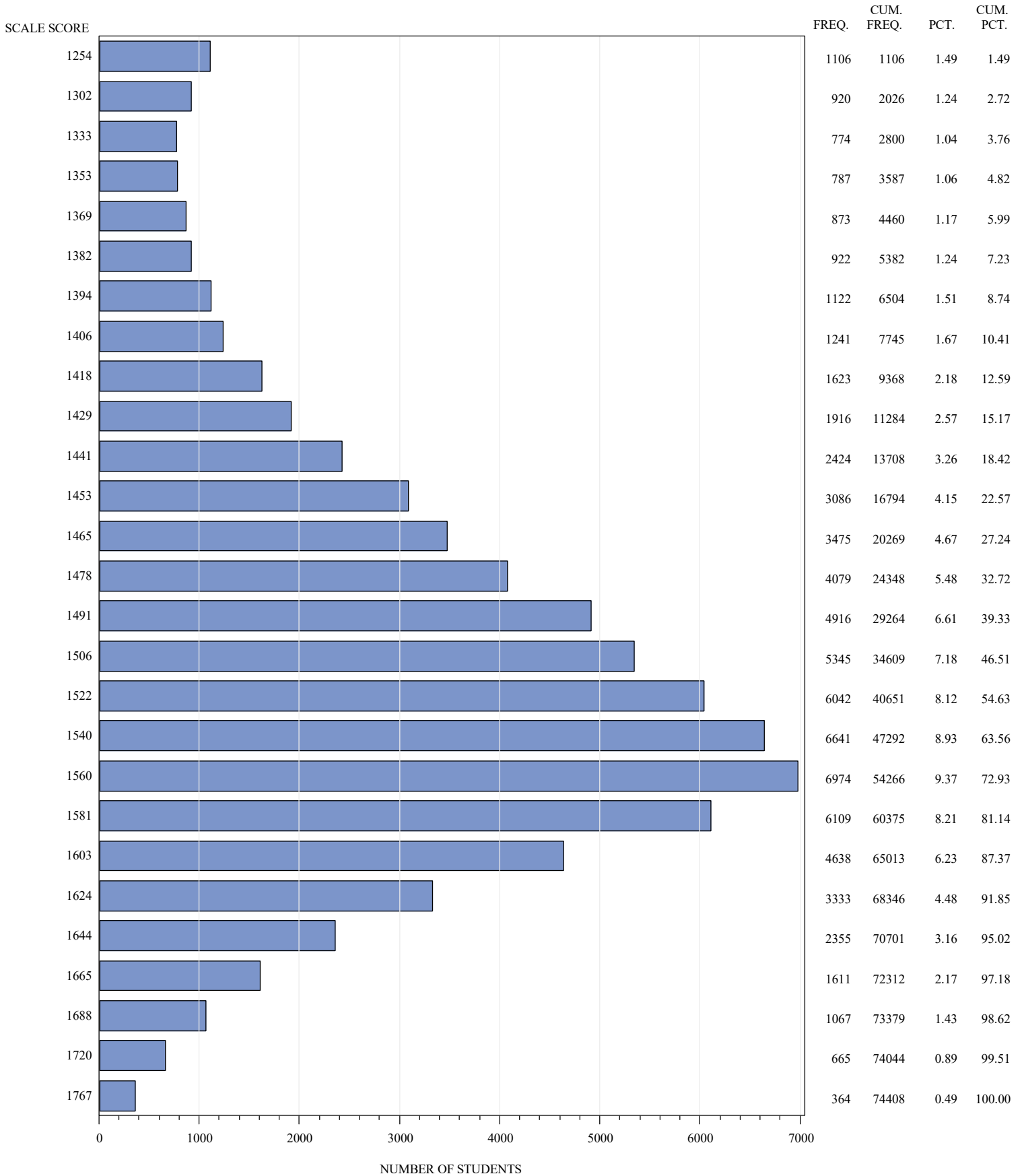
Students who took the listening holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.23 2020 TELPAS Grade 2 Speaking
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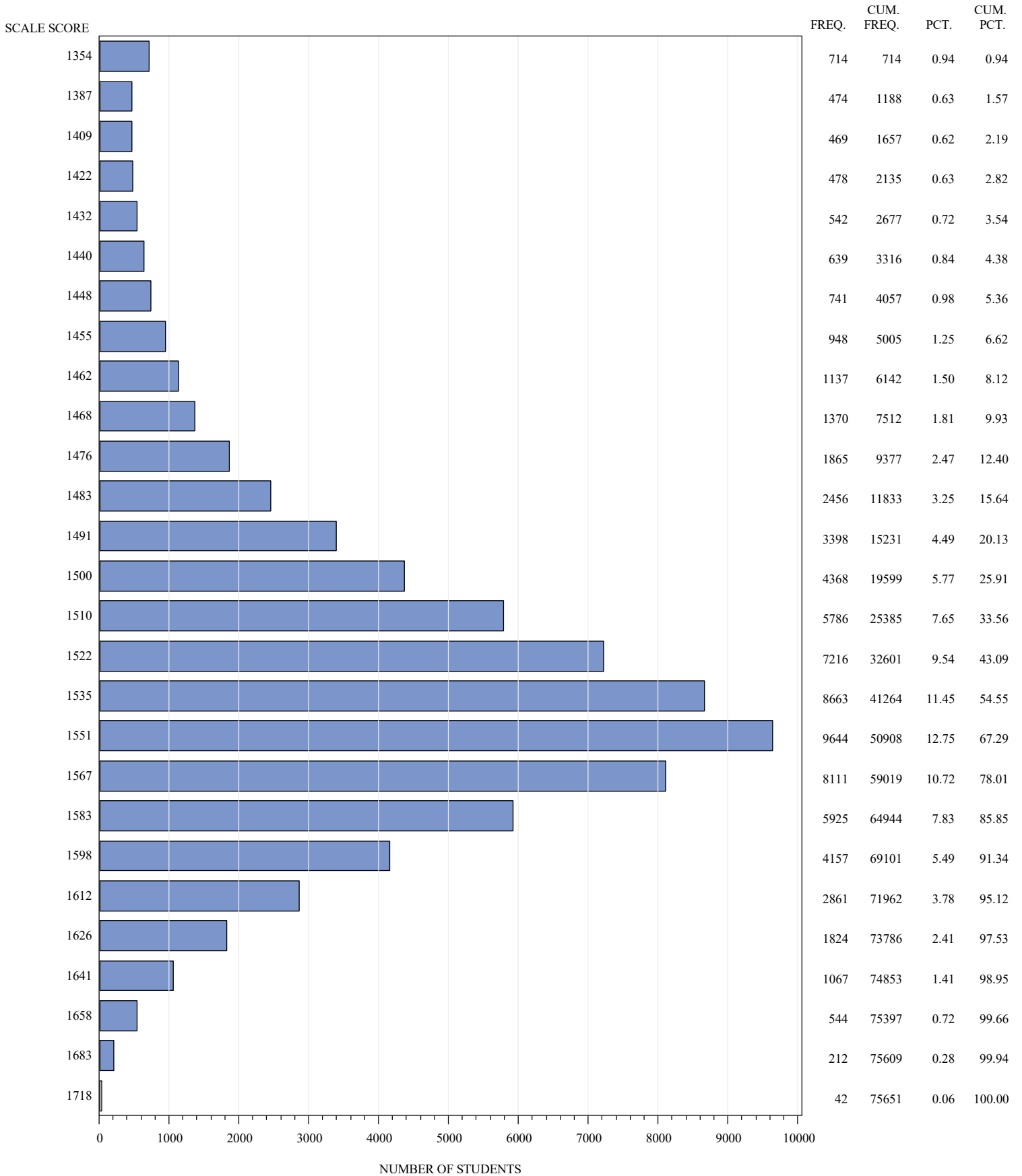
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.24 2020 TELPAS Grade 3 Speaking
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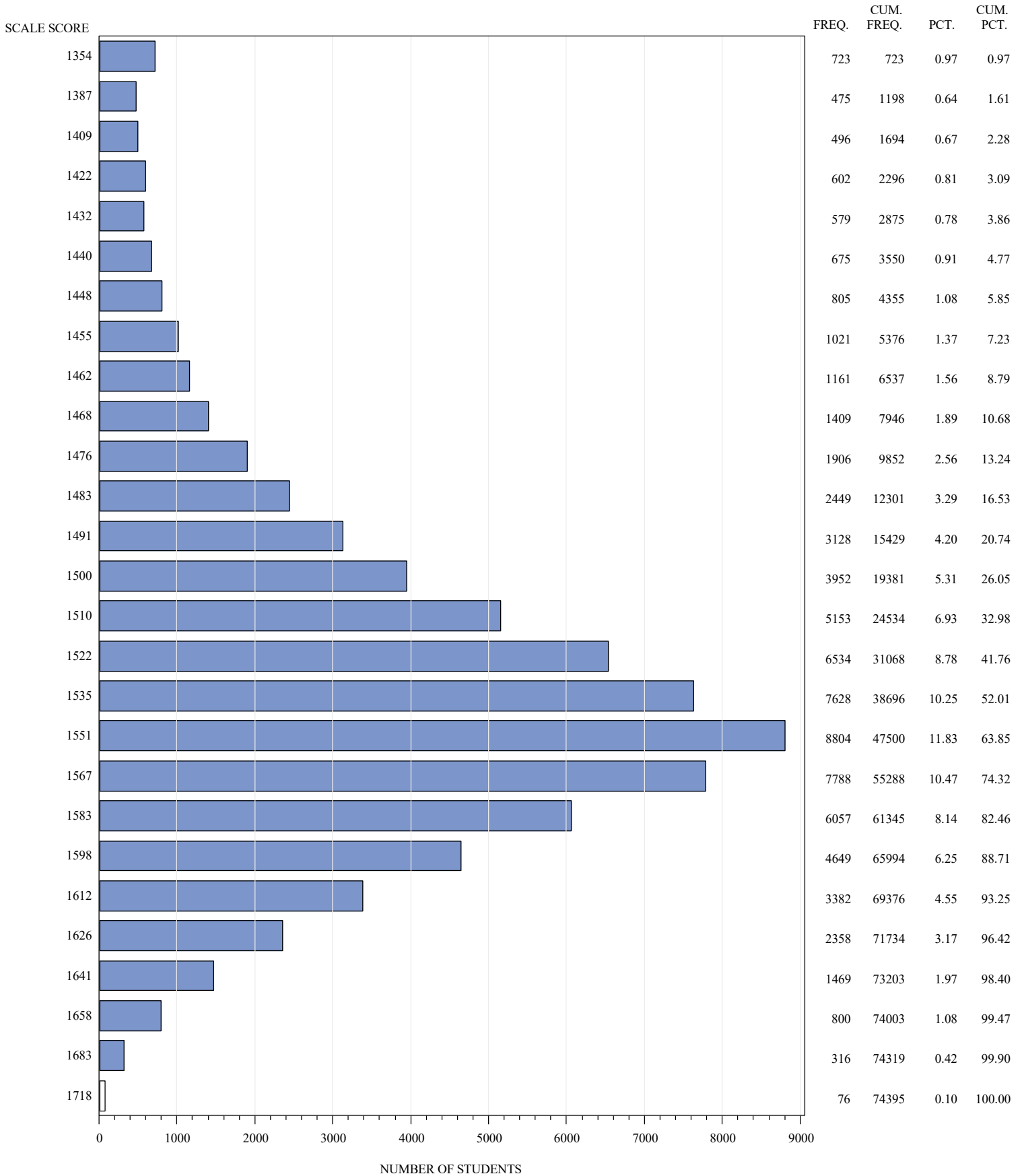
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.25 2020 TELPAS Grade 4 Speaking
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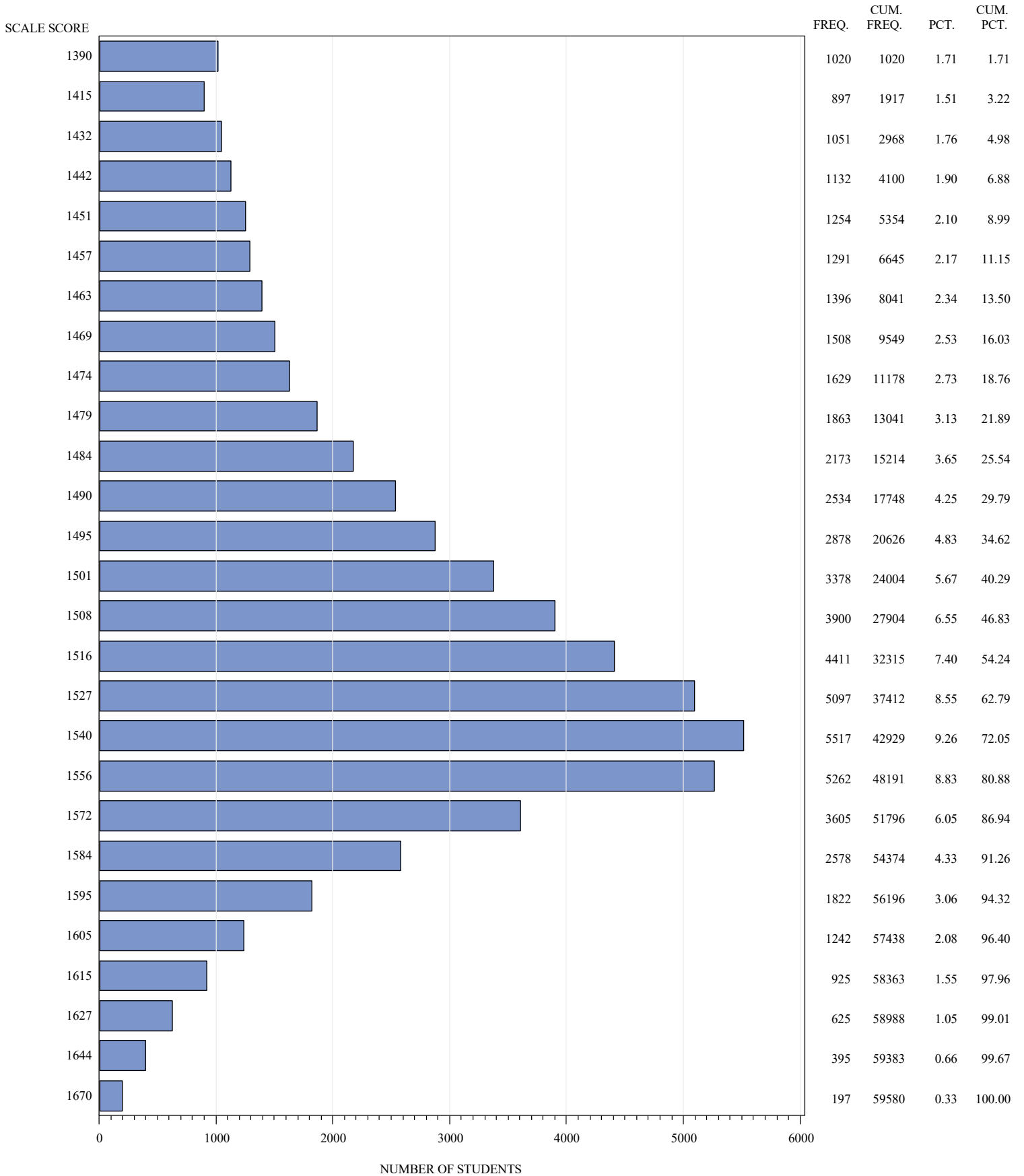
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.26 2020 TELPAS Grade 5 Speaking
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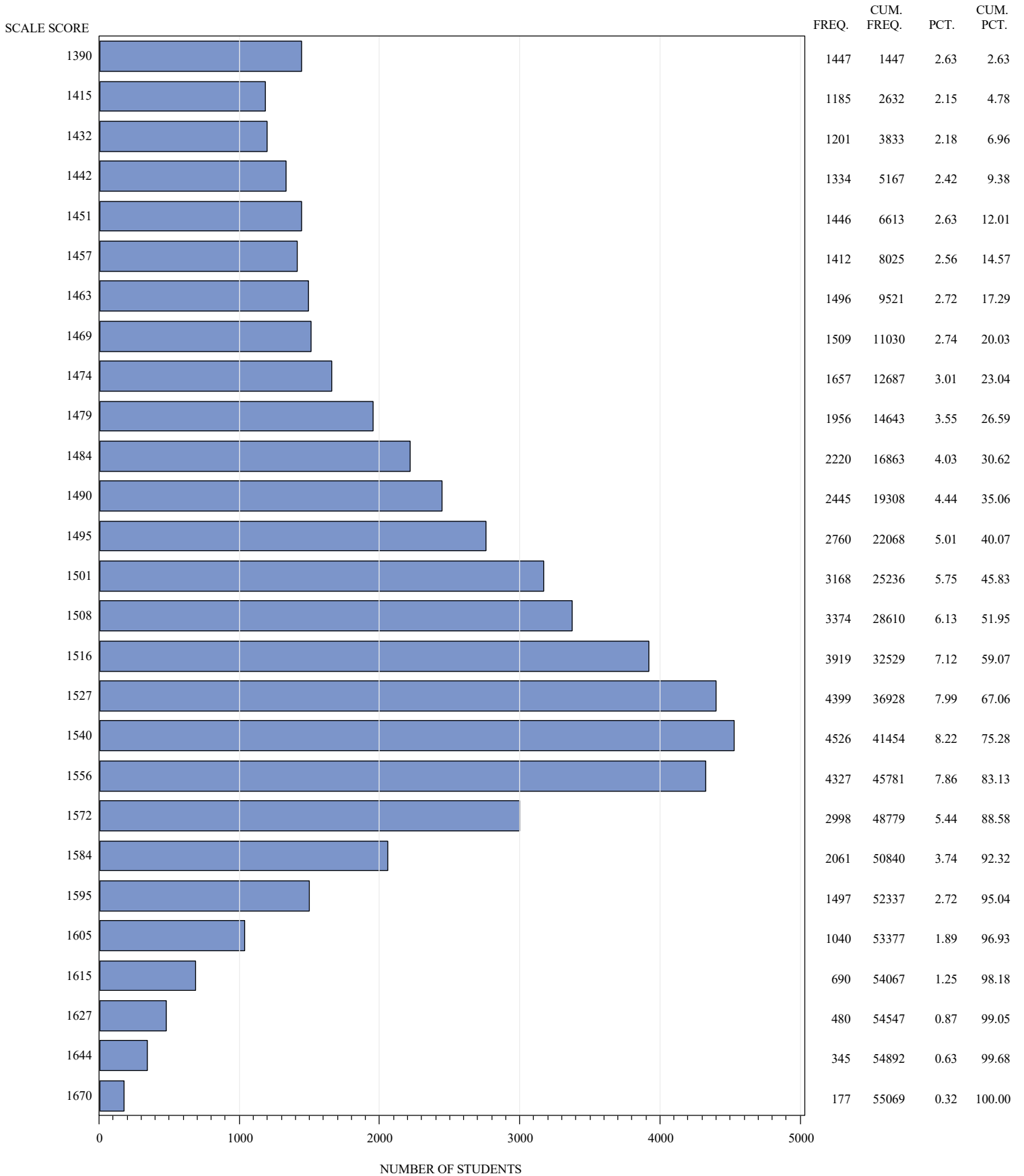
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.27 2020 TELPAS Grade 6 Speaking
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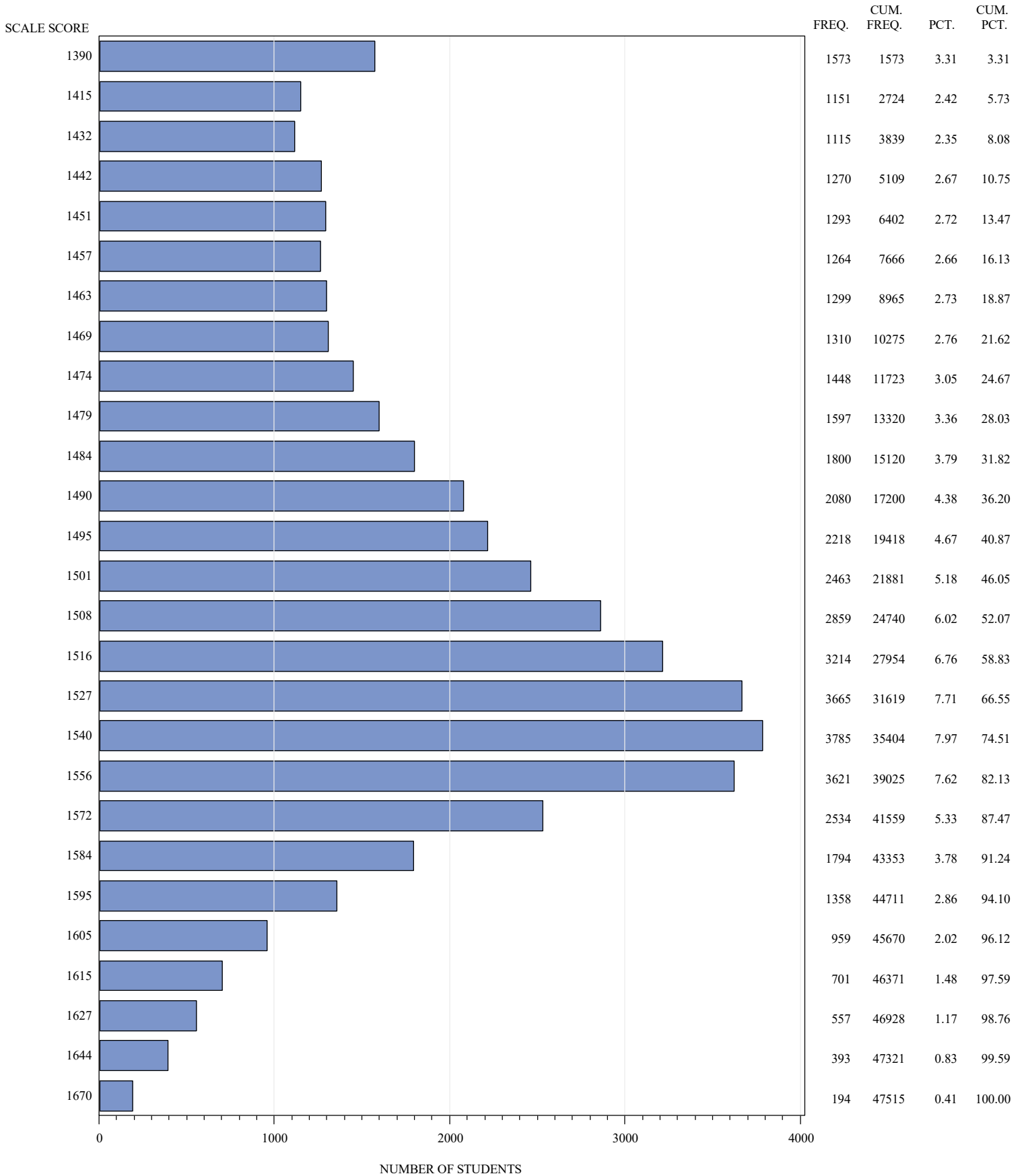
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.28 2020 TELPAS Grade 7 Speaking
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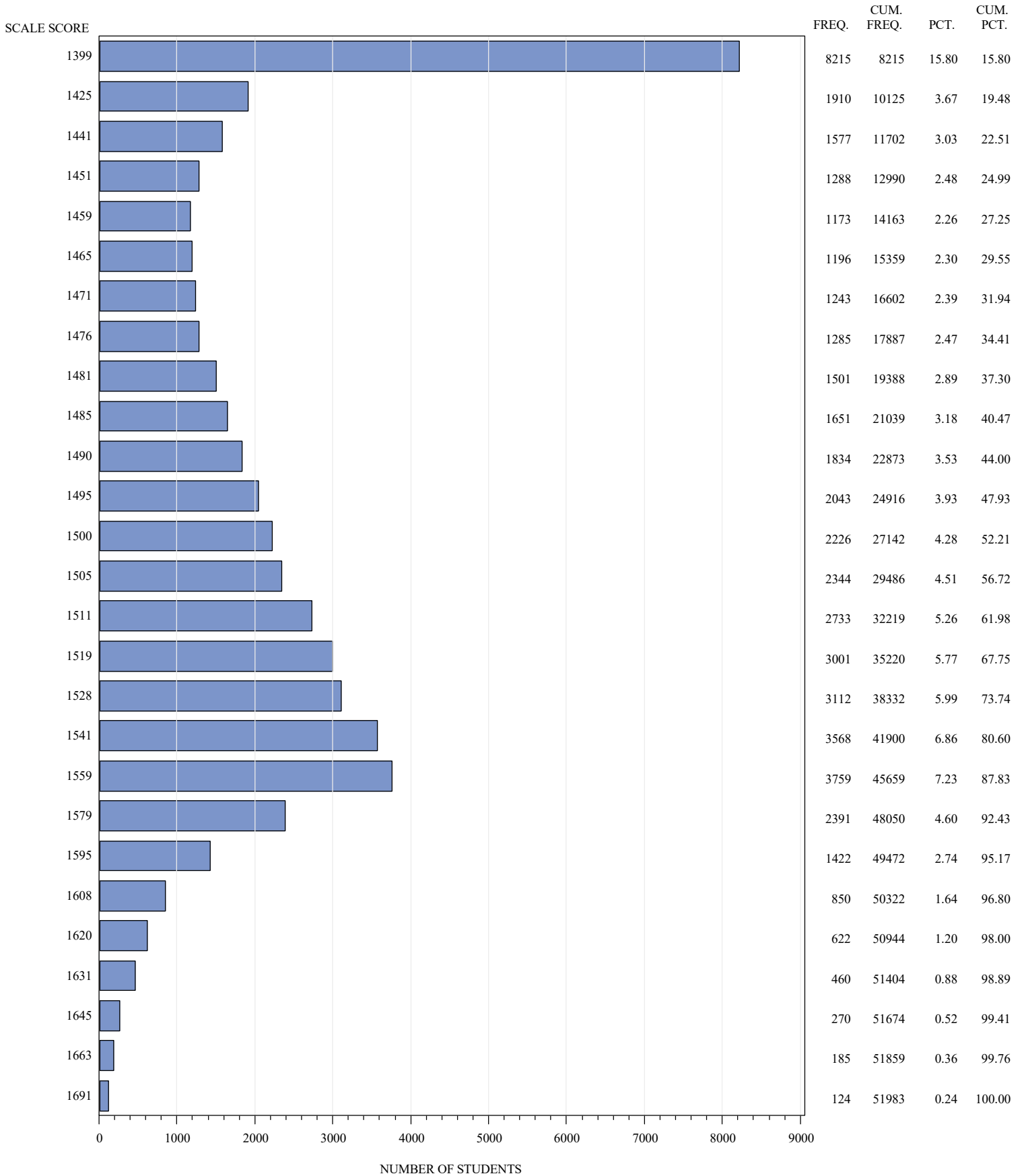
Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.29 2020 TELPAS Grade 8 Speaking
Frequency Distribution of Scale Scores
Online Students**



Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

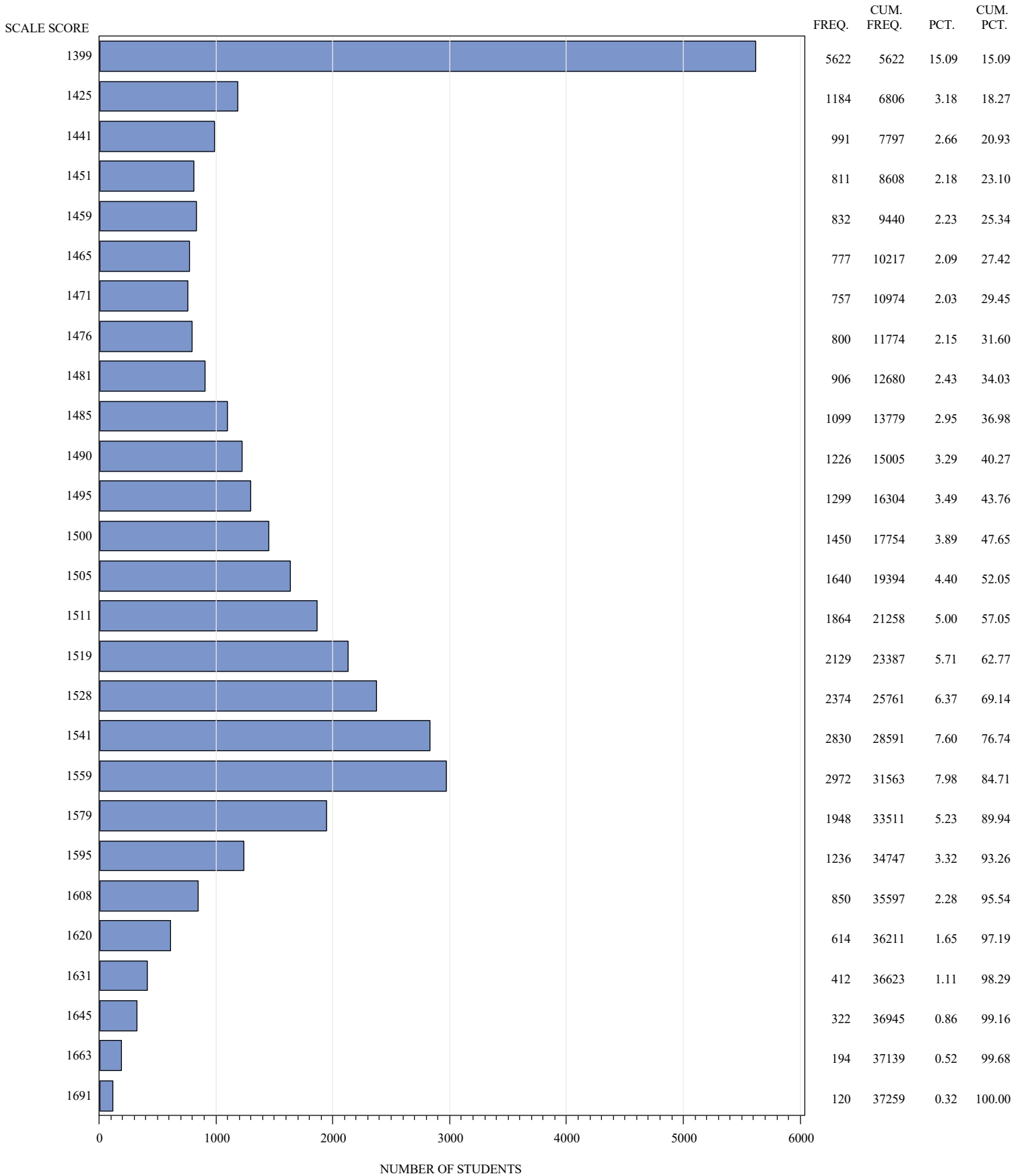
**Figure D.5.30 2020 TELPAS Grade 9 Speaking
Frequency Distribution of Scale Scores
Online Students**



Notes:

Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

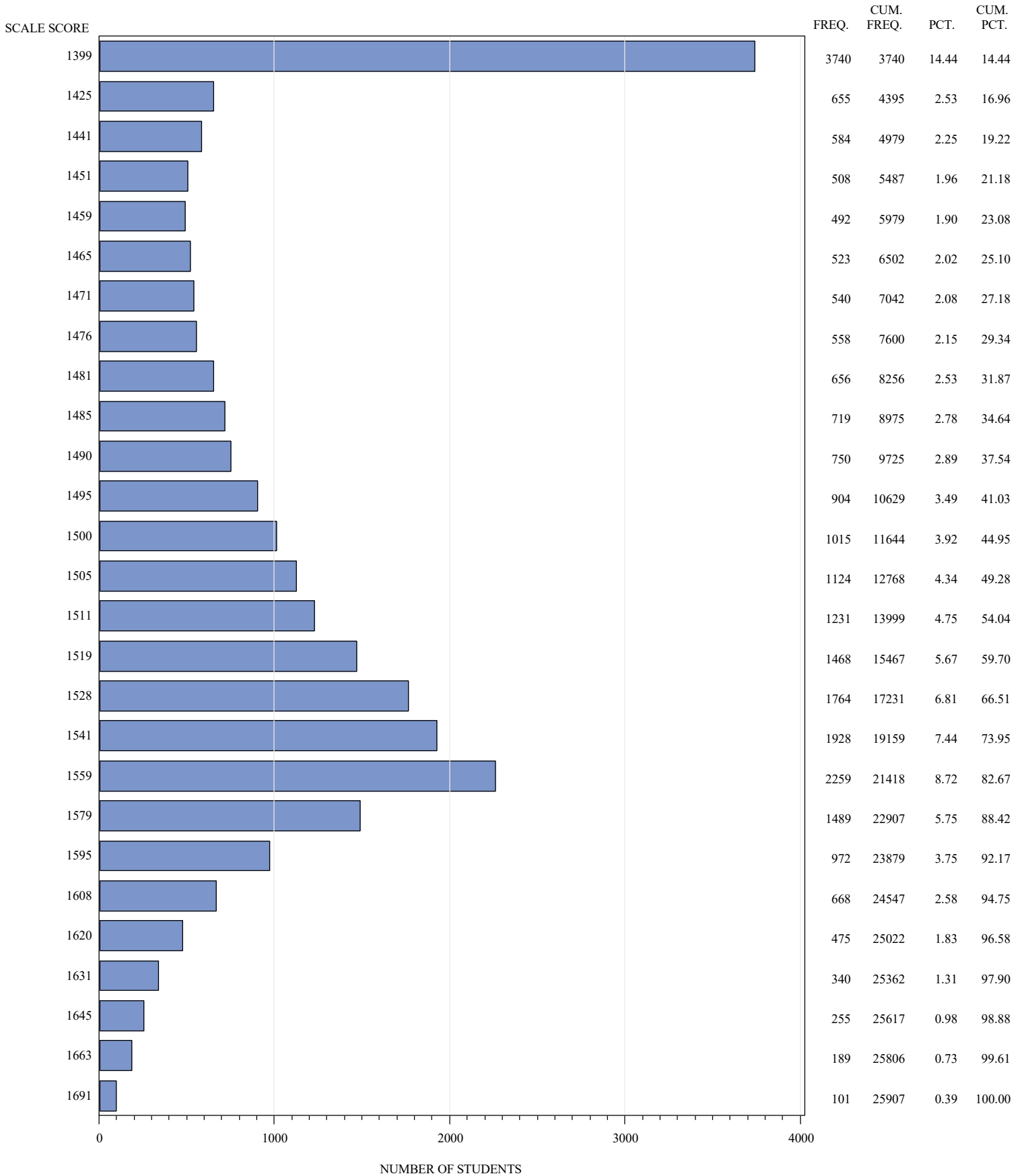
**Figure D.5.31 2020 TELPAS Grade 10 Speaking
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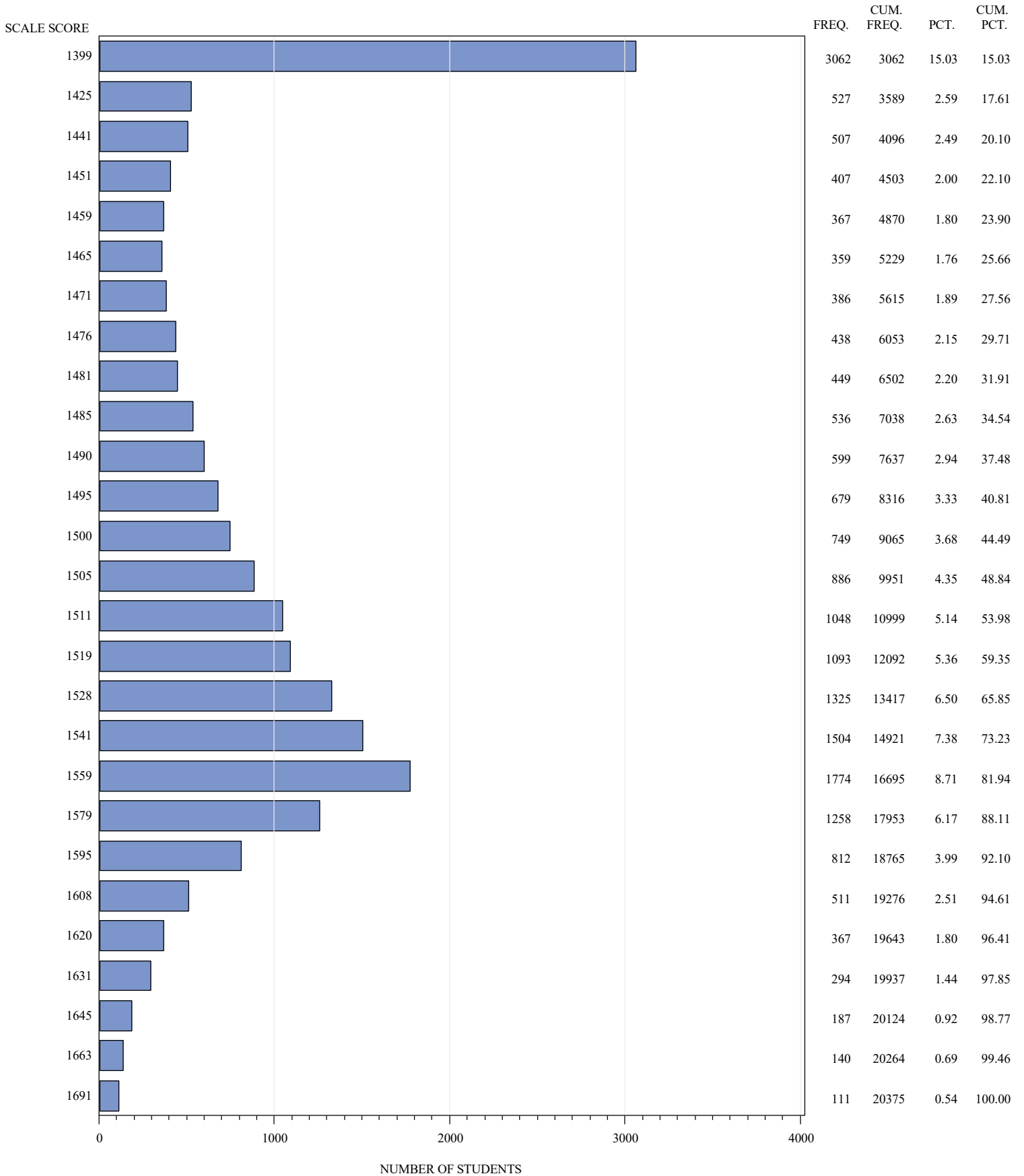
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.32 2020 TELPAS Grade 11 Speaking
Frequency Distribution of Scale Scores
Online Students**



Notes:
Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.

**Figure D.5.33 2020 TELPAS Grade 12 Speaking
Frequency Distribution of Scale Scores
Online Students**



Notes:

Students who took the speaking holistic rating version of the test are not included in the frequency distribution tables.