
2020–2021 LEAP Connect Operational Technical Summary

English Language Arts, Mathematics, and Science in
Grades 3 through 8 and High School

**LEAP
CONNECT**



2020–2021 Technical Summary

The tests used in Louisiana are carefully constructed to fairly assess the progress of Louisiana students. This document provides an overview of the process and summarizes some of the key psychometric information for the LEAP Connect assessments.

Introduction

In December of 2016, the Louisiana State Board of Elementary and Secondary Education (BESE) approved new Louisiana Connectors (LCs) aligned to the 2016 Louisiana Student Standards (LSS) in ELA and mathematics. These connectors are designed for use in the instruction and assessment of students with significant cognitive disabilities. They are derived from the general education standards but are reduced in depth, breadth, and complexity. The LCs in ELA and mathematics replaced what were formerly known as the Extended Standards. After the new LSS in science were approved in 2017, Louisiana began working with edCount, LLC, to develop LCs for science aligned to these new standards. The LCs for science were approved shortly after the adoption of the LSS for science.

In the 2017–2018 school year, Louisiana implemented the new LEAP Connect assessments in ELA and mathematics, which are fully aligned to the new LCs. The LEAP Connect assessments replaced the LAA1 assessment in ELA and mathematics, grades 3–8 and high school. The LEAP Connect assessments in ELA and mathematics for high school were first administered in the 2018–2019 school year.

The LAA1 science assessments were still used in 2017–2018 while the state worked with its vendor on the development of a new LEAP Connect science assessment aligned to the LCs in science. The science assessments were first administered in the 2019–2020 school year as census field tests in grades 4, 8, and high school, the same grades assessed by their predecessor, the LAA1 science assessments. No results were reported. This year (2021) marks the first operational administration for the new science tests.

Louisiana's *Bulletin 111* §3901 states that all students, including those with disabilities, shall participate in Louisiana's testing program. To be eligible to participate in the LEAP Connect assessments, an IEP team must verify that the student has a disability that significantly impacts cognitive functioning and meets the criteria outlined in *Bulletin 1530* §505. The LEAP Connect is designed for students with significant cognitive disabilities who cannot participate in the LEAP 2025 assessment, even with accommodations.

Federal law requires states to administer annual assessments to all students, including students with significant cognitive disabilities, to measure progress towards challenging academic content standards. The LEAP Connect assessments in ELA, mathematics, and science fulfill this requirement, in accordance with Sections 1111(b)(1)(E) and 8401 of the Elementary and Secondary Education Act of 1965.

Louisiana believes that all students, including those with the most significant cognitive disabilities, deserve an education that prepares them to be independent and successful in life after high school.

The Student Population

The LEAP Connect assessment system is designed for students with significant cognitive disabilities for whom participation in the general assessments would not be appropriate, even with accommodations. Understanding the characteristics of this population is a vital aspect of maintaining an effective system

of instruction and assessment and ensuring the system is serving the appropriate population. The Louisiana students who participate in the LEAP Connect must meet the following criteria:

1. The student has a disability that significantly impacts cognitive function and/or adaptive behavior.
2. The student requires extensive modified instruction aligned with the Louisiana Connectors to acquire, maintain, and generalize skills.
3. The decision to include the student in the alternate assessments is not solely based on certain factors (placement, behavior, English Learner status, etc.).

Section 1111(b)(2)(D)(i)(I) of the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the Every Student Succeeds Act (ESSA), states that no more than 1% of a state's total student population may participate in the alternate assessments. Louisiana exceeded this cap in the past few years in ELA and mathematics. The state did not exceed the 1% cap in science. The LDOE was granted a waiver for the 2017–2018 and 2018–2019 school years. However, the waiver for the 2019–2020 school year was denied.

As part of the effort to meet the 1% cap requirement, the LDOE has required each local education agency (LEA) that exceeds the 1% cap to:

- Provide written justification describing the specific reason(s) the percentage of students taking the alternate assessments exceeds 1%;
- Provide written assurance that the LEA followed the state's guidelines for participation in the alternate assessments; and
- Provide written assurance that the LEA would address any disproportionality in the percentage of students in any subgroup taking an alternate assessment.

In addition, the LDOE revised the alternate assessment eligibility criteria and deployed accountability and transparency enhancements to the statewide IEP system. The LDOE has provided additional resources and support to LEAs and educators to assist with implementing these changes, including but not limited to:

- Training and support to LEAs to clarify the revised eligibility criteria;
- A new webpage dedicated to students with significant cognitive disabilities;
- A resource library for students with significant cognitive disabilities; and
- Individualized support for LEAs whose student-level files indicated that IEP team decisions were not consistent with state participation criteria.

Although the LDOE's waiver request was denied in 2019–2020, a new waiver was submitted in November 2020 for the 2020–2021 school year and was granted with the following provisions:

As part of this waiver, the LDOE assured that it:

- Will meet all other requirements of section 1111 of the ESEA and implement regulations with respect to all State-determined academic standards and assessments, including reporting student achievement and school performance, disaggregated by subgroups, to parents and the public.

- Assessed at least 95 percent of all students and 95 percent of students with disabilities who are enrolled in grades for which an assessment is required in 2018-19, the most recent year for which data are available.
- Will require that an LEA submit information justifying the need of the LEA to assess more than 1.0 percent of its assessed students in any such subject with an Alternate Assessment based on Alternate Academic Achievement Standards (AA-AAAS).
- Will provide appropriate oversight of an LEA that is required to submit such information to the State, and it will make such information publicly available.
- Will verify that each LEA that is required to submit such information to the State is following all State guidelines in 34 CFR § 200.6(d) (with the exception of incorporating principles of universal design) and will address any subgroup disproportionality in the percentage of students taking an AA-AAAS.
- Will implement, consistent with the plan submitted in the LDOE’s waiver request, system improvements and will monitor future administrations of the AA-AAAS to avoid exceeding the 1.0 percent threshold.

The participation rates for the 2018–2019, 2019–2020, and 2020–2021 school years are provided in Exhibit 1. Both the percentage of students with significant cognitive disabilities (SWSCD) participating in the LEAP Connect out of all students eligible to participate in this assessment and the percentage of SWSCD assessed via the LEAP Connect out of the entire Louisiana student population are presented.

Exhibit 1. Alternate Assessment Participation Rates

Content Area	2017–2018		2018–2019		2019–2020		2020–2021	
	% of Eligible SWSCD	% of All LA Students	% of Eligible SWSCD	% of All LA Students	% of Eligible SWSCD	% of All LA Students	% of Eligible SWSCD	% of All LA Students
ELA	99.0	1.3	98.8	1.6	98.4	1.5	92.5	1.4
Math	98.8	1.3	98.7	1.6	98.3	1.5	92.2	1.4
Science ¹	98.9	0.7	97.8	0.7	100.0	0.7	89.9	0.7

Test Content Development

The LEAP Connect assessments measure student proficiency and achievement in ELA and mathematics in grades 3–8 and high school, and in science in grades 4, 8, and high school. The LEAP Connect system assesses student proficiency in terms of the LCs, which are fully aligned to the LSS for ELA, mathematics, and science. Each assessment provides age- and grade-appropriate content for all grades and courses while maintaining high expectations for all students, capturing the “big ideas” found in the LSS.

The LCs are utilized for assessment purposes in that they were designed to reflect the necessary knowledge and skills that students with the most significant cognitive disabilities need to reach critical learning targets or big ideas within the standards from grade band to grade band, leading to knowledge

¹ Reflects LAA1 Science participation in 2018–2019, the LEAP Connect census field test participation in 2019–2020, and the LEAP Connect Assessment in Science in 2020–2021.

of ELA, mathematics, and science for college, career, and community readiness by the end of high school.

The LCs are designed to provide fully aligned pathways for students with significant disabilities to work toward the LSS. The LCs identify the:

- Most salient grade-level, core academic content found in the LSS;
- Necessary knowledge and skills needed to reach grade-level expectations of the LSS;
- Core content, knowledge, and skills needed at each grade to promote success at the next; and
- Priorities in each content area to guide the instruction for students in this population.

Principled Design and Universal Design

The LEAP Connect assessment system was designed according to the principles of principled design and Universal Design (UD). According to AERA et al. (2014, pp. 6–7), tests should be designed to minimize construct-irrelevant barriers for all test takers in the target population. Thus, an understanding about student characteristics and the application of UD principles inform the design of each item and any necessary additional adaptations and accommodations that do not interfere with the measured construct. The principled design approach focuses the development of items for all students on construct-relevant content (i.e., the knowledge, skills, and abilities intended to be measured), minimizing the impact of construct-irrelevant skills (e.g., print size, lack of assistive technology device, inability to engage with the items), and considering appropriate accessibility options.

The definition and implementation of accessibility features for all aspects of the assessment development process to provide universal access (beyond what is currently achieved through accommodations and UD) is necessary to support improved performance for English Learners (ELs), students with disabilities, students with 504 plans, and students with disabilities who are ELs (Almond et al., 2010).

To this end, the LEAP Connect assessment developers incorporated the guidelines of UD as described by the National Center on Universal Design for Learning (<http://www.udcenter.org/>). Developers addressed the vast majority of student access needs (e.g., cognitive, processing, sensory, physical, language) up front in the design of the assessment items. This was done by embedding specific accessibility features (e.g., magnification, audio representation of graphic elements, linguistic simplification) into the structure and delivery of the assessment items and formats.

The LEAP Connect assessments administered February 1 to March 12, 2021, are fixed-form, computer-based tests administered online through the DRC INSIGHT platform. They are administered in a one-to-one setting and include both selected-response and constructed-response items. The assessments include several features that promote accessibility, including:

- The entire test can be read aloud to students.
- Students may respond to items based on their preferred mode of communication (e.g., eye gaze, assistive technology, point to a picture, etc.).
- Items include pictures and graphics to support what is read to students. Nearly all of the mathematics items contain visual stimuli to assist students in determining an answer.

- Items indicate when students may use calculators. Any student with an IEP accommodation for calculator use may use their specified calculator for every item. While an online calculator is provided, students may use the handheld calculator they typically use during instruction on the mathematics test.

Test Specifications

The LEAP Connect assessment items are written based on common item and test specifications, which establish performance levels with achievement level descriptors for ELA, mathematics, and science. The test specifications for the LEAP Connect assessments for ELA, mathematics, and science provide general guidelines for the development of all test items used in the assessments for each content area and grade level.

The assessment blueprints, as part of the overall test specifications, provide valid information about students' knowledge and skills in ELA, mathematics, and science in relation to the LCs. The blueprints also define what is centrally important, represent a balance of emphasis, and are vertically sequenced. For each content area, the LEAP Connect assessment blueprints include the content category, weight (as a percentage), LC, item type (selected-response or constructed-response), and number of score points for each assessed grade.

LEAP Connect items are written at four levels of complexity. To access the age- and grade-appropriate general curriculum content and to build skills and knowledge in ELA, mathematics, and science, SWSCD often need adaptations, scaffolds, and supports. For students to accurately demonstrate what they know and can do, these age- and grade-appropriate adaptations, scaffolds, and supports also need to be present within the assessment process. The assessment items incorporate important aspects of item design related to both varying levels of cognitive complexity and the degree and type of scaffolds and supports.

Reliability

The reliability of raw scores by test form was evaluated using Cronbach's (1951) coefficient alpha, which is a lower-bound estimate of test reliability. The reliability coefficient is a ratio of the variance of true test scores to the variance of the total observed scores, with the values ranging from 0 to 1. The closer the value of the reliability coefficient is to 1, the more consistent the scores, where 1 refers to a perfectly consistent test. In general, reliability coefficients that are equal to or greater than 0.8 are considered acceptable for tests of moderate length.

The reliability of reported test scores can be characterized by the standard errors associated with the scores. The standard error of measurement (SEM) may be used to determine the range within which a student's true score is likely to fall. An observed score should be regarded not as a student's true score but as an estimate of a student's true score. It is expected that the score a student obtains from a single test administration would fall within one SEM of the student's true score 68% of the time and within approximately two SEMs of the true score 95% of the time.

Total test reliability measures, such as Cronbach's coefficient alpha and SEM, consider the consistency (i.e., reliability) of performance over all test questions in a given form, the results of which imply how well the questions measure the content domain and could continue to do so over repeated administrations. The number of items in the test influences these statistics; a longer test can be expected to be more reliable than a shorter test.

The reliability coefficients and SEM for the LEAP Connect assessments are reported in The reliability statistics ranged from 0.84 to 0.88 for the ELA forms. For mathematics, the reliabilities ranged from 0.78 to 0.89. For science, the reliability values were from 0.78 to 0.82. It can be observed that for some testing forms (e.g. Mathematics grade 5), the reliabilities are slightly lower than 0.8, which might be caused by the relatively smaller standard deviations of the raw scores given that the SEM values were in a reasonable range (see Exhibit 2). These results indicate acceptable reliability coefficients for the LEAP Connect assessments.

Exhibit 2. The reliability statistics ranged from 0.84 to 0.88 for the ELA forms. For mathematics, the reliabilities ranged from 0.78 to 0.89. For science, the reliability values were from 0.78 to 0.82. It can be observed that for some testing forms (e.g. Mathematics grade 5), the reliabilities are slightly lower than 0.8, which might be caused by the relatively smaller standard deviations of the raw scores given that the SEM values were in a reasonable range (see Exhibit 2). These results indicate acceptable reliability coefficients for the LEAP Connect assessments.

Exhibit 2. Reliability and SEM

Content Area	Grade	N Items	Max Score Points	SEM	Cronbach's Alpha	N-Count
ELA	3 V	31	30	2.85	0.84	≥290
	3 NV	31	30	2.87	0.87	≥200
	4 V	32	31	2.92	0.85	≥360
	4 NV	32	31	2.86	0.87	≥150
	5	32	30	2.98	0.85	≥570
	6	32	30	2.80	0.88	≥800
	7	32	29	2.82	0.87	≥860
	8	32	31	2.80	0.86	≥930
	HS	31	28	2.71	0.87	≥850
Math	3	35	35	2.62	0.89	≥500
	4	35	33	2.67	0.85	≥510
	5	35	35	2.71	0.78	≥570
	6	35	35	2.58	0.86	≥800
	7	35	34	2.57	0.86	≥850
	8	35	35	2.61	0.88	≥920
	HS	35	35	2.61	0.87	≥840
	HS	35	35	2.61	0.87	≥840
Science	4	30	30	2.50	0.78	≥500
	8	30	30	2.36	0.81	≥910
	HS	30	30	2.36	0.82	≥850

Validity

Validity is the process of collecting evidence to support inferences by using the resulting scores from an assessment. In addition to showing reliability for the purpose for which assessment results are intended, results must show evidence of validity. Validity evidence is created throughout the entire assessment process, from the design of the test to item development to score reporting. Therefore, evidence of validity is found throughout this report, such as the Test Content Development and Reliability sections.

A test that shows evidence of content validity would contain items that represent the intended domain and cover a suitable range of tasks relevant to that domain. A content-valid test of English language arts needs items with which an examinee can demonstrate their ability to read and write, while a content-valid test of mathematics needs items with which an examinee can demonstrate their ability to perform various computational tasks.

According to Standard 1.11, “When the rationale for test score interpretation for a given use rests in part on the appropriateness of test content, the procedures followed in specifying and generating test content should be described and justified with reference to the intended population to be tested and the construct the test is intended to measure or the domain it is intended to represent” (AERA, APA, & NCME, p. 26). Test specifications for each section of the test were developed by edCount to determine a balance of ELA, mathematics, and science items that would best demonstrate the ability of LEAP Connect examinees. The items were then developed based on these specifications. These items went through various checks and reviews by content matter experts to ensure their suitability for a test geared toward students with cognitive disabilities, as well as their measurement of the intended domain. Experts also reviewed the items’ distractors to ensure that only the keyed response would be an appropriate answer.

Construct-irrelevant variance refers to error variance that is caused by factors unrelated to the constructs measured by the test. For example, when tests are not administered under standardized conditions (e.g., one administration may be timed, but another administration is untimed), differences in student performance related to different administration conditions may result. Careful specification of the content and the review of the items representing that content are first steps in minimizing construct-irrelevant variance. Then, empirical evidence, especially item-level data, is used to infer construct irrelevance. For LEAP Connect, minimization of construct-irrelevant variance and construct underrepresentation is addressed in the following steps of the test development process: (1) specification, (2) item writing, (3) review, (4) field testing, (5) test construction, and (6) item calibration.

To present evidence of construct-related validity, the 2020–2021 LEAP Connect Technical Report describes in detail the following validity studies:

- Classification Accuracy and Consistency;
- Dimensionality and Local Independence;
- Item-Total Correlations; and
- Differential Item Functioning.

In addition, the technical report addresses validity evidence based on the five factors specified in the *Standards for Educational and Psychological Testing (Standards; AERA, APA, & NCME, 2014)*. These include:

- Test content;
- Response processes;
- Internal structure;
- Relationships to other variables; and
- Consequences of testing.

Uses of Test Scores

To understand whether a test score is being used properly, one must understand the purpose of the test. The intended uses of the LEAP Connect test scores include the following:

- To gauge student progress in relation to grade-level academic standards;
- To help educators improve their teaching practices year to year to raise student achievement; and
- To inform school accountability decisions.

LEAP Connect scores are not meant to be diagnostic in nature and are not used to alter instruction in real time. Rather, they provide an end-of-year snapshot that stakeholders at the state, district, school, and classroom levels can use to make informed decisions for the following school year.

Test Level Scores

At the test level, an overall scale score that is based on student performance on the entire test is reported. In addition, an associated level of achievement is reported. These scores and achievement levels indicate, in varying ways, a student's achievement in ELA, mathematics, or science. Test-level scores are reported at four reporting levels: the state, the school system, the school, and the student.

Two types of test-level scores are reported to indicate a student's achievement on the LEAP Connect: (1) the scale score and (2) its associated level of achievement.

Scale Scores

Scale scores are derived from raw scores (i.e., the number of items answered correctly). Raw scores depend on the items in a particular form of a test and can only be interpreted in terms of that particular set of test questions. This does not allow year-to-year or form-to-form comparison. Scale scores are more meaningful than raw scores because they maintain their meaning year-to-year, thus allowing comparisons of different test forms across the entire range of the ability scale. For LEAP Connect assessments, scale scores range from 1200 to 1290 for all grades.

Scale scores are used to represent student performance on LEAP Connect tests. A higher scale score represents more knowledge, skill, and ability than a lower scale score. Scale scores for the same test can be compared regardless of when students were tested or which form was taken. Scale scores are also averaged together to represent the overall performance of a school, a school system, and the state.

Scale scores are comparable for results within the same grade and the same content area across years.

Achievement Levels

Achievement levels describe how students perform based on Louisiana's expectations and how prepared they are for the next level of study. Achievement Level Descriptors (ALDs) for ELA and mathematics at grades 3–8 and 11 were developed through an iterative process involving multiple stakeholder groups. The science ALDs were developed following the same process. The achievement levels for each grade summarize the knowledge, skills, and abilities that the average student demonstrates within each scale-score range. Each achievement level is cumulative, meaning each level includes the knowledge, skills, and abilities of the preceding levels.

The number and percent in achievement levels are reported at the school, school system, and state levels. Since this information is based on scale scores, it is comparable across groups for the same test

regardless of when the test was taken or which form was taken. Unlike scale scores, it may be used to monitor group performance over time, across grade levels.

Uses of Test Scores

The LEAP Connect scale scores and achievement levels provide summary evidence of student performance relative to the LSS and LCs. Classroom teachers may use these scores as evidence of student achievement in the assessed content areas. At the aggregate level, school system and school administrators may use this information for activities such as curriculum planning. The results presented in the technical report provide evidence that the scale scores and achievement levels are valid and reliable indicators of what students know, understand, and are able to do relative to the LSS and LCs in each content area.

IRT Calibration, Equating, and Scaling

In previous years, the analyses for the LEAP Connect assessment were based on the application of the two-parameter (2PL) IRT model. For the 2021 administration, new forms were administered in Louisiana for all content areas (i.e., ELA, mathematics, and science). Due to the relatively small numbers of students who take the LEAP Connect (as few as 500 in a given grade), the underlying IRT model for the LEAP Connect was changed from the 2PL model to the Rasch model.

LEAP Connect items were first calibrated with WINSTEPS (Linacre, 2012) using three-year LEAP Connect data (2018 – 2020) for ELA and mathematics grades 3–8 and high school. In consideration of the small sample sizes for individual forms and the large number of common items across forms for the same grade and content area, the data from different forms across the three years were combined for a concurrent calibration. The estimated item parameters were fixed in WINSTEPS for the creation of raw-to-theta conversion tables for each combination of grade, level, and content area. These fixed calibration runs were separated for each form by grade, content area, and year. The concurrent calibration ensures that the item parameter and theta estimates from different forms for a specific content area and grade are on the same scale.

Given the transition of the measurement model from the 2PL to the Rasch model, it was necessary to evaluate the model fit. The item infit and outfit statistics from WINSTEPS were used to evaluate the fit, where the infit and outfit statistics range from 0 to infinity with 1 representing ideal model fit. Items were considered to be misfit if their infit or outfit statistics are outside of the 0.7 to 1.3 range (Wright and Linacre, 1994). Specifically, if the items' fit statistics are greater than 1.3, the items were considered to be "Underfit." If the fit statistics are less than 0.7, the items were considered to be "Overfit." Infit statistics are influenced by unexpected responses from students on items that are measuring near their ability level (Wright and Masters, 1982). Outfit statistics are heavily influenced by unexpected student responses to items that are either relatively easy or relatively hard. The average fit values were around 1, which indicates a good fit of the model to the data.

While the number of misfit items varies across the different content areas and grades, the number of underfit items (Outfit values >1.3) was relatively small. Yen and Fitzpatrick (2006) describe some causes of item misfit, including small sample sizes, poorly estimated item parameters, item stem quality, item mis-keys, and item distractor quality. All of these potential causes were carefully investigated. As a result, we are confident that these are not contributing factors in the fit statistics.

Standard Setting

The LDOE conducted standards validation, standard setting, and vertical articulation for all LEAP Connect tests in June 2021. Cut scores for all ELA tests and mathematics tests for grades 3-8 underwent standards validation, while standard setting was conducted for all science tests and the high school mathematics test. Cut scores for all tests were reviewed in a vertical articulation activity and submitted to the LDOE for final review and approval.

Scaling

The LDOE decided to establish a new scale system (1200–1290) for LEAP Connect assessment based on the results using a two-point method (level 2 cut of 1232 and level 3 cut of 1240) for all grades and content areas. The two-point method for scaling used two RP cut values ($\hat{\theta}_1$ and $\hat{\theta}_2$) and their corresponding scale scores (SS_1 and SS_2) to establish the score scale. The linear transformation was calculated by $SS = \alpha * \hat{\theta} + \beta$, where $\alpha = (SS_2 - SS_1) / (\hat{\theta}_2 - \hat{\theta}_1)$ and $\beta = SS_1 + \alpha * \hat{\theta}_1$. Note that for all content areas and grades, the Level 2 scale score cuts were fixed at 1232 and the Level 3 scale score cuts were fixed at 1240 for a best practice. The calculated intercepts and slopes are then applied to the aforementioned raw-to-theta conversions for unrounded scale scores. For the reported scale score, the unrounded scale scores are rounded to the nearest integer numbers with the minimum of 1200 and the maximum of 1290.

Results Summary

Results for ELA, Mathematics, and Science are summarized in Exhibit 3.

Exhibit 3. Results Summary

Content Area	Grade	N	Percent by Achievement Level				Scale Score	
			Below Goal	Near Goal	At Goal	Above Goal	Mean	Std Dev
ELA	3	≥500	30.63	20.95	37.75	10.67	1239.14	17.05
	4	≥520	27.72	19.69	29.64	22.94	1240.13	16.23
	5	≥570	15.28	25.69	38.54	20.49	1243.16	13.00
	6	≥800	22.65	23.89	34.03	19.43	1240.04	12.56
	7	≥860	20.88	18.10	24.94	36.08	1242.85	15.14
	8	≥930	12.14	30.40	18.05	39.42	1240.79	9.28
	HS	≥850	12.81	13.75	54.88	18.57	1247.42	14.38
Mathematics	3	≥500	35.50	9.86	37.08	17.55	1244.11	28.64
	4	≥510	26.41	19.61	26.41	27.57	1242.41	17.74
	5	≥570	21.43	22.13	34.32	22.13	1244.29	16.96
	6	≥800	23.70	24.69	17.74	33.87	1242.85	15.13
	7	≥850	11.59	17.68	38.17	32.55	1250.79	18.50
	8	≥920	21.04	18.00	21.04	39.91	1250.97	23.65
	HS	≥840	25.97	22.79	20.43	30.81	1242.51	17.21
Science	4	≥500	18.38	38.54	12.65	30.43	1239.97	11.20
	8	≥910	13.18	22.55	13.40	50.87	1244.64	12.60
	HS	≥850	17.76	18.59	20.82	42.82	1242.54	13.63

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