

# Score Definitions

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Renaissance Star Math scores represent how students performed on the test compared with the performance of a nationally representative sample of students, called the norms group. These scores present a snapshot of achievement at a specific point in time. As with any test, it is important to remember that many factors can affect a student's test scores. Renaissance Star Math test scores give only one picture of how a student is doing in school.

**Domain Scores** estimate a student's mastery of each domain for the student's grade level. For example, a domain score of 50 for a 5th grader means the student would be expected to answer correctly approximately 50 percent of the fifth-grade items in that domain.

**Grade Equivalent (GE)** is a norm-referenced score ranging from 1 to 12.9+. (Because Star Math norms go no lower than grade 1, the GE for a score below the minimum for GE 1.0 is reported as "< 1.") It represents how a student's test performance compares with that of other students nationally. For example, a fifth-grade student with a GE of 7.6 performed as well on Star Math as a typical seventh-grader after the sixth month of the school year. This score doesn't necessarily mean that the student is capable of doing seventh-grade math—instead, it indicates that this student's math skills are well above average for the fifth grade.

**Grade Placement (GP)** is a numeric representation of a student's grade level, based on the specific month in which a student takes a Star Math test. Star Math considers the standard school year to run from September through June and assigns increment values of 0.0 through 0.9 to these months. The software automatically assigns grade placements using a student's grade level and the month in which the Star Math test was taken. GP is important because PR and NCE values are based not only on the Scaled Score but also on the grade placement of the student at the time of the test.

**Normal Curve Equivalent (NCE)** is a norm-referenced score similar to percentile rank but based on an equal interval scale. This means that the difference between any two successive scores on the NCE scale has the same meaning throughout the scale. NCEs are useful in making comparisons between different achievement tests and for statistical computations such as determining an average score for a group of students. NCE scores range from 1 to 99. NCEs are used mostly for research purposes.

**Percentile Rank (PR)** is a norm-referenced score that provides a measure of a student's math ability compared to other students in the same grade nationally. The percentile rank score, which ranges from 1 to 99, indicates the percentage of other students nationally who obtained scores equal to or lower than the score of a particular student. For example, a student with a percentile rank score of 85 performed as well as or better than 85 percent of other students in the same grade.

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*A GE score preceded by ">" is a capped score. GE scores in excess of three grade levels above the student's actual grade are capped, meaning that such GE scores are shown as "> [student's actual grade level + 3]." This prevents the misinterpretation that students with excessively high GE scores are capable of work at those higher grades.*

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**Percentile Rank Range (PR Range)** indicates the statistical variability in a student's percentile rank score. For example, a student with a percentile rank range of 32–59 is likely to score within that range if the Star Math test is taken again within a short time (i.e., four to six weeks).

**Quantile® Measure** is used to help educators understand which skills and concepts students are ready to learn, the level of success students are expected to have with an upcoming skill or concept, and how students are growing in mathematics on a single scale across grade levels. The Quantile® Measure is shown as a number with a “Q” after it: 750Q is 750 Quantile®. Quantile® Measures range from below 0Q to above 1400Q and span the skills and concepts taught in kindergarten through high school. Scores below 0Q are prefixed with “EM” for Emerging Mathematician. For these scores, the higher the *number* is, the lower the actual score is: for example, a score of EM200Q is lower than EM100Q.

**Quantile® Range** represents the difficulty range that optimizes the likelihood of a successful instructional experience. It is calculated by adding and subtracting 50 points from a student's Quantile® Measure. For example, a student with a Quantile® Measure of 738Q would have a Quantile® Range of 688Q–788Q.

**Scaled Score (SS)** is useful for comparing student performance over time and across grades. A scaled score is calculated based on the difficulty of questions and the number of correct responses. Because the same range is used for all students, scaled scores can be used to compare student performance across grade levels. Star Math scaled scores range from 0–1400 on the Enterprise Scale and 600–1400 on the Unified Scale. All norm-referenced scores are derived from the scaled score.

**Student Growth Percentile (SGP)** is a norm-referenced quantification of individual student growth derived using quantile regression techniques. An SGP compares a student's growth to that of his or her academic peers nationwide. SGPs range from 1–99 and interpretation is similar to that of Percentile Rank scores; lower numbers indicate lower relative growth and higher numbers show higher relative growth. For example, an SGP of 70 means that the student's growth from one test window to another exceeds the growth of 70% of students nationwide in the same grade with a similar achievement history.

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Renaissance Star Reading scores represent how students performed on the test compared with the performance of a nationally representative sample of students, called the norms group. These scores present a snapshot of achievement at a specific point in time. As with any test, it is important to remember that many factors can affect a student's test scores. Renaissance Star Reading test scores give only one picture of how a student is doing in school.

**Domain Scores** estimate a student's mastery of each domain for the student's grade level. For example, a domain score of 50 for a 5th grader means the student would be expected to answer correctly approximately 50 percent of the fifth-grade items in that domain.

**Estimated oral reading fluency (Est. ORF)** is an estimate of a student's ability to read words quickly and accurately in order to comprehend text efficiently. Students with oral reading fluency demonstrate accurate decoding, automatic word recognition, and appropriate use of the rhythmic aspects of language (e.g., intonation, phrasing, pitch, and emphasis). Est. ORF is reported in correct words per minute, and is based on a known relationship between Star Reading performance and oral reading fluency. Est. ORF is only reported for students in grades 1–4.

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*A GE score preceded by ">" is a capped score. GE scores in excess of three grade levels above the student's actual grade are capped, meaning that such GE scores are shown as "> [student's actual grade level + 3]." This prevents the misinterpretation that students with excessively high GE scores are capable of work at those higher grades.*

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**Grade Equivalent (GE)** is a norm-referenced score that represents how a student's test performance compares with other students nationally. For example, a fifth-grade student with a GE score of 7.6 performed as well as a typical seventh-grader after the sixth month of the school year. This score doesn't necessarily mean that the student is capable of reading seventh-grade material—it only indicates that the student's reading skills are well above average for the fifth grade.

**Grade Placement (GP)** is a numeric representation of a student's grade level, based on the specific month in which a student takes a Star Reading test. Star Reading considers the standard school year to run from September through June and assigns increment values of 0.0 through 0.9 to these months. The software automatically assigns grade placements using a student's grade level and the month in which a Star Reading test was taken. GP is important because PR and NCE values are based not only on the Scaled Score but also on the grade placement of the student at the time of the test.

**Instructional Reading Level (IRL)** is calculated after a student completes a Star Reading test; it is a criterion-referenced score that is the highest reading level at which a student is 80% proficient (or higher) at comprehending material with assistance. Research has found that this level of comprehension corresponds to being at least 90–98% proficient at recognizing words; Star Reading does not directly assess word recognition. IRL scores are Pre-Primer (PP), Primer (P), grades 1.0 through 12.9, and Post-High School (PHS).

**Lexile® Measure** represents a student’s reading ability. The Lexile® Measure is shown as a number with an “L” after it: 750L is 750 Lexile®. Higher Lexile® measures indicate higher levels of reading ability. A Lexile® measure can range from below 200L for emergent readers to above 1600L for advanced readers. Readers who score below 0L receive a BR for Beginning Reader.

**Lexile® Range** is a range calculated from a Lexile® Measure. The Lexile® Range is calculated by subtracting 100L and adding 50L to a student’s Lexile® Measure. For example, a student with a Lexile® Measure of 700L would have a Lexile® Range of 600L–750L.

**Normal Curve Equivalent (NCE)** is a norm-referenced score that is similar to percentile rank, but is based on an equal interval scale. This means the difference between any two successive scores on the NCE scale has the same meaning throughout the scale. NCEs are useful in making comparisons between different achievement tests and for statistical computations—for example, determining an average score for a group of students. NCE scores range from 1 to 99 and are mostly used for research.

**Percentile Rank (PR)** is a norm-referenced score that provides a measure of a student’s reading ability compared to other students in the same grade nationally. The percentile rank score, which ranges from 1 to 99, indicates the percentage of other students nationally who obtained scores equal to or lower than the score of a particular student. For example, a student with a percentile rank score of 85 performed as well as or better than 85 percent of other students in the same grade.

**Percentile Rank Range (PR Range)** indicates the statistical variability in a student’s percentile rank score. For example, a student with a percentile rank range of 32–59 is likely to score within that range if the Star Reading test is taken again within a short time (i.e., four to six weeks).

**Scaled Score (SS)** is useful for comparing student performance over time and across grades. A scaled score is calculated based on the difficulty of questions and the number of correct responses. Because the same range is used for all students, scaled scores can be used to compare student performance across grade levels. Star Reading scaled scores range from 0–1400 on the Enterprise Scale and from 600–1400 on the Unified Scale. All norm-referenced scores are derived from the scaled score.

**Student Growth Percentile (SGP)** is a norm-referenced quantification of individual student growth derived using quantile regression techniques. An SGP compares a student’s growth to that of his or her academic peers nationwide. SGPs range from 1–99 and interpretation is similar to that of Percentile Rank scores; lower numbers indicate lower relative growth and higher numbers show higher relative growth. For example, an SGP of 70 means that the student’s growth from one test window to

another exceeds the growth of 70% of students nationwide in the same grade with a similar achievement history.

**Zone of Proximal Development (ZPD)** is a range of readability levels from which a student should select books to read. It is a range that is neither too hard nor too easy, within which students can experience optimal growth. Students' individual ZPDs are reported on the Star Reading Diagnostic, Parent, Reading Range, and Summary reports. Remember that ZPDs are approximate and professional judgment should be used to adjust the range to fit the ability level of each student.

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Renaissance Star Early Literacy scores represent how well a student understands concepts and possesses specific skills that are important in the development of reading ability. These scores represent a snapshot of achievement at a specific point in time. As with any assessment, it is important to remember that many factors can affect a student's scores. Renaissance Star Early Literacy scores give only one picture of how well a student is doing in school.

**Scaled Score (SS)** is calculated based on the difficulty of items and the number of correct responses. Because the same range is used for all students, scaled scores can be used to compare student performance across grade levels. Star Early Literacy scaled scores relate directly to the literacy classifications; they range from 300–900 on the Enterprise Scale and from 200–1100 on the Unified Scale.

**Literacy classifications** are the stages of literacy development measured in Star Early Literacy and associated with scaled scores. These stages are an easy way to monitor student progress:

Literacy Classification	Enterprise Scale <sup>a</sup>	Unified Scale			Definition
		Pre-K to Grade 1	Grade 2	Grades 3+	
Emergent Reader	Early 300–487	Early 200–682	Early 200–709	Early 200–732	Student is beginning to understand that printed text has meaning. The student is learning that reading involves printed words and sentences, and that print flows from left to right and from the top to the bottom of the page. The student is also beginning to identify colors, shapes, numbers, and letters.
	Late 488–674	Late 683–785	Late 710–802	Late 733–824	Student can identify most of the letters of the alphabet and can match most of the letters to their sounds. The student is beginning to read picture books and familiar words around their home. Through repeated reading of favorite books with an adult, students at this stage are building their vocabularies, listening skills, and understandings of print.
Transitional Reader	Early 675–724	Early 786–815	Early 803–829	Early 825–851	Student has mastered alphabet skills and letter-sound relationships. The student can identify many beginning and ending consonant sounds and long and short vowel sounds.
	Late 725–774	Late 816–851	Late 830–862	Late 852–882	Student is probably able to blend sounds and word parts to read simple words. The student is likely using a variety of strategies to figure out words, such as pictures, story patterns, and phonics.
Probable Reader	775–900	852–1100	863–1100	883–1100	Student is becoming proficient at recognizing many words, both in and out of context. The student spends less time identifying and sounding out words and more time understanding what he or she has read. Probable readers can start to blend sounds and word parts to read words and sentences more quickly, smoothly, and independently.

a. The cutoff scores are based on the relationship between Scaled Scores and proficiency in literacy domains and skills. During test development, data showed that students with Scaled Scores of 675 and higher also achieved skill scores above 80 in five sets of skills critical to beginning reading. Students with Scaled Scores of 775 and higher achieved skill scores above 70 in all literacy domains.

**Domain Scores** estimate a student's mastery of each domain for the student's grade level. For example, a domain score of 50 for a 5th grader means the student would be expected to answer correctly approximately 50 percent of the fifth-grade items in that domain.

**Literacy sub-domain score** is a criterion-referenced score that represents the percentage of items a student would be expected to answer correctly within a sub-domain. Literacy sub-domain scores range from 0 to 100 in ten areas, covering 41 skill sets, which contain 145 separate literacy skills:

- **Alphabetic Principle (AP)** assesses a student's knowledge of letter names, alphabetic letter sequences, and the sounds associated with letters.
- **Concept of Word (CW)** assesses a student's understanding of print concepts regarding written word length and word borders and the difference between words and letters.
- **Visual Discrimination (VS)** assesses a student's ability to differentiate both upper- and lowercase letters, identify words that are different, and match words that are the same.
- **Phonemic Awareness (PA)** assesses a student's understanding of rhyming words; blending and segmenting word parts and phonemes; isolating and manipulating initial, final, and medial phonemes; and identifying the sounds in consonant blends.
- **Phonics (PH)** assesses a student's understanding of short, long, and variant vowels and other vowel sounds; initial and final consonants; consonant blends and digraphs; consonant and vowel substitution; and identification of rhyming words and sounds in word families.
- **Structural Analysis (SA)** assesses a student's understanding of affixes and syllable patterns in decoding and identification of compound words.
- **Vocabulary (VO)** assesses a student's knowledge of high-frequency words, regular and irregular sight words, multi-meaning words, words used to describe categorical relationships, position words, synonyms and antonyms.
- **Sentence-Level Comprehension (SC)** assesses a student's ability to identify the meaning of words in contextual sentences.
- **Paragraph-Level Comprehension (PC)** assesses a student's ability to identify the main topic of text and the ability to answer literal and inferential questions after listening to or reading text.
- **Early Numeracy (EN)** assesses a student's ability to identify and name numbers; understand number-object correspondence; complete sequences; compose and decompose groups of up to ten; and compare sizes, weights, and volumes.

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the student's growth from one test window to another exceeds the growth of 70% of students nationwide in the same grade with a similar achievement history.

**Skill Score** is a criterion-referenced score that estimates a student's percent of mastery of specific skills within each of the ten sub-domains. Skill scores range from 0 to 100.

**Estimated Oral Reading Fluency (Est. ORF)** is an estimate of a student's ability to read words quickly and accurately in order to comprehend text efficiently. Students with oral reading fluency demonstrate accurate decoding, automatic word recognition, and appropriate use of the rhythmic aspects of language (e.g., intonation, phrasing, pitch, and emphasis). Est. ORF is reported in correct words per minute, and is based on a known relationship between Star Early Literacy performance and oral reading fluency.

For instance, the score interpretation for a second-grade student with an Est. ORF score of 60 would be that the student is expected to read 60 words correctly within one minute on a passage with a readability level between 2.0 and 2.5.

Star Early Literacy reports estimated oral reading fluency only for grades 1–3.

**Grade Equivalent (GE)** is a norm-referenced score that represents how a student's test performance compares with other students nationally. For example, a fifth-grade student with a GE score of 7.6 performed as well as a typical seventh-grader after the sixth month of the school year. This score doesn't necessarily mean that the student is capable of reading seventh-grade material—it only indicates that the student's reading skills are well above average for the fifth grade.

**Grade Placement (GP)** is a numeric representation of a student's grade level, based on the specific month in which a student takes a Star Early Literacy test. Star Early Literacy considers the standard school year to run from September through June and assigns increment values of 0.0 through 0.9 to these months. The software automatically assigns grade placements using a student's grade level and the month in which a Star Early Literacy test was taken.

**Percentile Rank (PR)** ranges from 1–99 and expresses student ability relative to the scores of other students in the same grade. For a particular student, this score indicates the percentage of students in the norms group who obtained lower scores. For example, if a student has a Percentile Rank of 85, the student's literacy skills are greater than 85% of other children in the same grade.

**Lexile® Measures** became available in Star Early Literacy (in cooperation with MetaMetrics®) in the winter of 2018–2019, allowing users to include them in certain Star Early Literacy score reports. Lexile® Measures represent a student's reading ability. Reported Lexile® Measures range from BR1300L to 2220L. (The "L" suffix identified the score as a Lexile® Measure. Where it appears, the "BR" prefix indicates a score that is below 0 on the Lexile® scale; such scores are typical of beginning readers.)

**Lexile® Ranges** are calculated by subtracting 100L from and adding 50L to a student's Lexile® Measure. For example, a student with a Lexile® Measure of 700L would have a

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*A GE score preceded by ">" is a capped score. GE scores in excess of three grade levels above the student's actual grade are capped, meaning that such GE scores are shown as "> [student's actual grade level + 3]." This prevents the misinterpretation that students with excessively high GE scores are capable of work at those higher grades.*

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Lexile® Range of 600L–750L. In Star Early Literacy, Lexile® Measures below BR400L are shown on reports for progress monitoring purposes only. A score below BR400L is not meant to be used to match readers with text; in these cases, a Lexile® Range is not reported.

Star Early Literacy was developed as a criterion-referenced assessment system. Students are compared to a criterion or a standard and an absolute score is reported. The norming study of summer 2014 enhanced the product to include relative scores to compare students to one another.

Star Early Literacy was normed in the summer of 2017. For more information, see the *Star Early Literacy Technical Manual*.



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