



Grade 4 Mathematics Assessment

Eligible Texas Essential
Knowledge and Skills

STAAR Grade 4 Mathematics Assessment

Mathematical Process Standards

These student expectations will not be listed under a separate reporting category. Instead, they will be incorporated into test questions across reporting categories since the application of mathematical process standards is part of each knowledge statement.

- (4.1) Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to
- (A) apply mathematics to problems arising in everyday life, society, and the workplace;
 - (B) use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;
 - (C) select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;
 - (D) communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate;
 - (E) create and use representations to organize, record, and communicate mathematical ideas;
 - (F) analyze mathematical relationships to connect and communicate mathematical ideas; and
 - (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

Reporting Category 1:
Numerical Representations and Relationships

The student will demonstrate an understanding of how to represent and manipulate numbers and expressions.

- (4.2) Number and operations. The student applies mathematical process standards to represent, compare, and

- (B) decompose a fraction in more than one way into a sum of fractions with the same denominator using concrete and pictorial models and recording results with symbolic representations ;
Supporting Standard
- (C) determine if two given fractions are equivalent using a variety of methods; **Supporting Standard**
- (D) compare two fractions with different numerators and different denominators and represent the comparison using the symbols $>$, $=$, or $<$; and **Reading Standard**
- (G) represent fractions and decimals to the tenths or hundredths as distances from zero on a number line. **Supporting Standard**

Reporting

Reporting Category 3: Geometry and Measurement

The student will demonstrate an understanding of how to represent and apply geometry and measurement concepts.

- (4.5) Algebraic reasoning. The student applies mathematical process standards to develop concepts of expressions and equations. The student is expected to
- (D) solve problems related to perimeter and area of rectangles where dimensions are whole numbers. **Readine Standard**
- (4.6) Geometry and measurement. The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties. The student is expected to
- (A) identify points, lines, line segments, rays, angles, and perpendicular and parallel lines; **Supporting Standard**
 - (B) identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure; **Supporting Standard**
 - (C) apply knowledge of right angles to identify acute, right, and obtuse triangles; and **Supporting Standard**
 - (D) classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size. **Readine Standard**
- (4.7) Geometry and measurement. The student applies mathematical process standards to solve problems involving angles less than or equal to 180 degrees. The student is expected to
- (C) determine the approximate measures of angles in degrees to the nearest whole number using a protractor; **Readine Standard**
 - (D) draw an angle with a given measure; and **Supporting Standard**
 - (E) determine the measure of an unknown angle formed by two non-overlapping adjacent angles given one or both angle measures. **Supporting Standard**

Reporting Category 4:
Data Analysis and Personal Financial Literacy

The student will demonstrate an understanding of how to represent and analyze data and how to describe and apply personal financial concepts.

- (4.9) Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying