

Understanding the Mathematical Process Standards

What are the Process Standards?

The process standards are skills in the Texas Essential Knowledge and Skills (TEKS) for mathematics, science, and social studies describe ways in which students are expected to engage with the content. These standards/skills should be incorporated into the teaching of the TEKS when possible so that students can attain a greater depth of understanding of complex content. The student expectations addressing mathematical process standards have become a central part of the TEKS for mathematics.

Process Skills on STAAR Mathematics Assessments

For the STAAR assessments, process skills in mathematics will be assessed in context, not in isolation, which will allow for a more integrated and authentic assessment of these content areas.

Process skills will be incorporated into test questions that are designed to address content within the TEKS. Multiple process standards/skills will be incorporated into test questions from the content reporting categories, and all the math questions will have at least two process standards/skills included.

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.