

Math Education LESS/MORE Chart

Math education will involve LESS...

Focus on practicing procedures and memorizing basic number combinations.

Students using the same standard computational algorithms and the same prescribed methods to solve algebraic problems.

Teachers telling students exactly what definitions, formulas, and rules they should know and demonstrating how to use this information to solve mathematical problems.

Memorizing information that is presented and then using it to solve routine problems on homework, quizzes, and tests.

Guiding students step by step through problem solving to ensure they are not frustrated or confused.

Same instruction for all.

Math education will involve MORE...

Focus on developing understanding of concepts and procedures through problem solving, reasoning, and discourse.

Students having a range of strategies and approaches from which to choose in solving problems, including, but not limited to, general methods, standard algorithms, and procedures.

Teachers engaging students in tasks that promote reasoning and problem solving and facilitating discourse that moves students toward shared understanding of mathematics.

Students making sense of mathematic tasks by using varied strategies and representations, justifying solutions, making connections to prior knowledge and considering the reasoning of others.

Providing students with appropriate challenge, encouraging perseverance in problem solving, and supporting productive struggle in mathematics.

Differentiated instruction toward the same learning outcome.