

**6<sup>th</sup> grade Ohio Mathematics Benchmarks  
“Batter Up”**

**Mathematics**

Number, Number Sense and Operations

4. Describe what it means to find a specific percent of a number, using real-life examples.
5. Use models and pictures to relate concepts of ratio, proportion and percent, including percents less than 1 and greater than 100.
6. Use order of operations, including the use of exponents, decimals and rational numbers, to simplify numerical expressions.
7. Use simple expressions involving integers to represent and solve problems.
8. Represent multiplication and division situations involving fractions and decimals with models and visual representations.
9. Give examples of how ratios are used to represent comparisons.
11. Perform fraction and decimal computations and justify their solutions.
13. Estimate reasonable solutions to problem situations involving fractions and decimals.
14. Use proportional reasoning, ratios and percents to represent problem situations and determine the reasonableness of solutions.

Mathematical Processes Benchmarks

- A. Clarify problem-solving situations and identify potential solution processes; e.g., consider different strategies and approaches to a problem, restate problem from various perspectives.
- B. Apply and adapt problem-solving strategies to solve a variety of problems, including unfamiliar and non-routine problem situations.
- C. Use more than one strategy to solve a problem, and recognize there are advantages associated with various methods.
- D. Recognize whether an estimate or an exact solution is appropriate for a given problem situation.
- E. Use deductive thinking to construct informal arguments to support reasoning and to justify solutions to problems.

F. Use inductive thinking to generalize a pattern of observations for particular cases, make conjectures, and provide supporting arguments for conjectures.

G. Relate mathematical ideas to one another and to other content areas.

H. Use representations to organize and communicate mathematical thinking and problem solutions.

I. Select, apply and translate among mathematical representations to solve problems; e.g., representing a number as a fraction, decimal or percent as appropriate for a problem.

J. Communicate mathematical thinking to others and analyze the mathematical thinking and strategies of others.

K. Recognize and use mathematical language and symbols when reading, writing and conversing with others.