

# MICHIGAN TEST FOR TEACHER CERTIFICATION (MTTC)

## TEST OBJECTIVES FIELD 096: BASIC SKILLS

### Subareas

Reading  
Mathematics  
Writing

### READING

#### **Determine the meaning of words and phrases.**

Includes using the context of a passage to determine the meaning of words with multiple meanings, unfamiliar and uncommon words and phrases, and figurative expressions.

#### **Understand the main idea and supporting details in written material.**

Includes identifying explicit and implicit main ideas; and recognizing ideas that support, illustrate, or elaborate the main idea of a passage.

#### **Identify a writer's purpose, point of view, and intended meaning.**

Includes recognizing a writer's expressed or implied purpose for writing; evaluating the appropriateness of written material for various purposes or audiences; recognizing the likely effect of a writer's choice of words on an audience; and using the content, word choice, and phrasing of a passage to determine a writer's opinion or point of view.

#### **Analyze the relationship among ideas in written material.**

Includes identifying the sequence of events or steps; identifying cause-effect relationships; analyzing relationships between ideas in opposition; identifying solutions to problems; and drawing conclusions inductively and deductively from information stated or implied in a passage.

#### **Use critical reasoning skills to evaluate written material.**

Includes evaluating the stated or implied assumptions on which the validity of a writer's argument depends; judging the relevance or importance of facts, examples, or graphic data to a writer's argument; evaluating the logic of a writer's argument; evaluating the validity of analogies; distinguishing between fact and opinion; and assessing the credibility or objectivity of the writer or source of written material.

**TEST OBJECTIVES**  
**FIELD 096: BASIC SKILLS**

**Apply study skills to reading assignments.**

Includes organizing and summarizing information for study purposes; following written instructions or directions; and interpreting information presented in charts, graphs, or tables.

**MATHEMATICS**

***Fundamental Mathematics***

**Use number concepts and computation skills.**

Includes adding, subtracting, multiplying, and dividing fractions, decimals, and integers; using the order of operations to solve problems; solving problems involving percents; performing calculations using exponents and scientific notation; estimating solutions to problems; and using the concepts of "less than" and "greater than."

**Solve word problems involving integers, fractions, or decimals (including percents, ratios, and proportions).**

Includes determining the appropriate operations to solve word problems; and solving word problems involving integers, fractions, decimals, percents, ratios, and proportions.

**Interpret information from a graph, table, or chart.**

Includes interpreting information in line graphs, bar graphs, pie graphs, pictographs, tables, charts, or graphs of functions.

***Algebraic Graphing, Equations, and Operations***

**Graph numbers or number relationships.**

Includes identifying points from their coordinates, the coordinates of points, or graphs of sets of ordered pairs; identifying the graphs of equations or inequalities; finding the slopes and intercepts of lines; and recognizing direct and inverse variation presented graphically.

**Solve one- and two-variable equations.**

Includes finding the value of the unknown in one-variable equations; expressing one variable in terms of a second variable in two-variable equations; and solving a system of two linear equations in two variables.

**Solve word problems involving one and two variables.**

Includes solving word problems that can be translated into one-variable linear equations or systems of two-variable linear equations; and identifying the equation or equations that correctly represent the mathematical relationship(s) in word problems.

**TEST OBJECTIVES**  
**FIELD 096: BASIC SKILLS**

**Understand operations with algebraic expressions.**

Includes factoring quadratics and polynomials; adding, subtracting, and multiplying polynomial expressions; and performing basic operations on and simplifying rational expressions.

***Geometry and Reasoning***

**Solve problems involving geometric figures.**

Includes identifying the appropriate formula for solving geometric problems; solving problems involving two- and three-dimensional geometric figures; and solving problems involving right triangles using the Pythagorean theorem.

**Apply reasoning skills.**

Includes drawing conclusions using the principles of similarity, congruence, parallelism, and perpendicularity; and using inductive and deductive reasoning.

**WRITING**

**Communicate in connected writing to a specified audience, with attention to appropriateness, unity and focus, development, organization, sentence structure, usage, and mechanical conventions.**

All candidates at a given administration will respond to a writing assignment, following standardized directions. Candidates will be asked to prepare writing samples of about 300 to 600 words, which will be scored on the basis of how effectively they communicate a whole message to a specified audience for a stated purpose.