MTEL®-Flex Middle School Mathematics—Statistics, Probability, and Algebra
(Objective 0015)

Objective 0015: Prepare an organized, developed analysis on a topic related to one or more of the following: statistics, probability, and algebra.

Objective 0015 includes the following descriptive statements:

1. Create appropriate graphs and/or diagrams, including all proper labels, to model and describe a given real-world situation.
2. Apply appropriate mathematical techniques to make a prediction or comparison regarding the situation.
3. Make a recommendation or argument based on the prediction or comparison.
4. Discuss factors that could influence the accuracy of the prediction/comparison and recommendation/argument.

MTEL®-Flex enables you to demonstrate your functional content knowledge of the MTEL Middle School Mathematics test objectives through submitting materials on a topic that you select. **You must provide an analysis on a topic related to one or more of the following areas of mathematics: statistics, probability, and algebra. Your analysis must address the four descriptive statements listed above.**

Your submission will be evaluated on the extent to which you demonstrate the **depth of your subject matter knowledge** of the MTEL-Flex Middle School Mathematics test objective you selected during registration.

MTEL-Flex involves answering 4 prompts and writing an analysis in which you demonstrate your knowledge of the content assessed by the test objective and further elaborated by the required descriptive statements in relation to your stated topic.

Your responses to the first 4 prompts should be **no more than 2 single-spaced pages** and your written analysis should be **no more than 3 single-spaced pages.** This instructions page does not count toward your page limits.

This template contains a [Prompt Section](#Prompts) and a [Written Analysis Section](#WrittenAnalysis). Once both sections are completed, upload the template to the Pearson ePortfolio System.

For more information about the MTEL-Flex Assessment, preparing your materials for submission, and scoring of your submission, refer to the MTEL-Flex Assessment Handbook.

Prompt Section

Respond to the prompts below (**no more than 2 pages, including prompts**) by typing your responses in Arial 11-point, single-spaced font, within the brackets following each prompt. Do not delete or alter the prompts. Only the first page will be evaluated. The previous page of instructions and the written analysis that follows do not count toward your page limit. Your submission cannot contain hyperlinks to any materials.

1. Indicate one mathematics topic that you have selected from within the domains identified below that are included in the Massachusetts Mathematics Curriculum Framework – 2017.

* Ratios and Proportional Relationships (6.RP) – p. 57
* Expressions and Equations (6.EE) – pp. 58–59
* Statistics and Probability (6.SP) – p. 60
* Ratios and Proportional Relationships (7.RP) – p. 63
* Expressions and Equations (7.EE) – p. 64
* Statistics and Probability (7.SP) – pp. 65–66
* Expressions and Equations (8.EE) – pp. 69–70
* Functions (8.F) – p. 70
* Statistics and Probability (8.SP) – p. 71

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2. Indicate 1 to 3 Standards of Mathematical Practice Grades 6–8 from Appendix II
(pp. 174–176) of the Massachusetts Mathematics Curriculum Framework – 2017 that you think are best related to the mathematics topic you selected in Prompt #1. Briefly describe (1 to 3 sentences for each standard) the connection you have identified between the mathematical topic you selected and the practice standard.

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3. Write a 1- to 3-sentence scenario that describes a mathematical problem related to the topic selected in Prompt #1. The scenario you describe should be one that permits you to demonstrate the depth of your mathematics subject matter knowledge. The descriptive statements explain what information you must include to support your analysis of this scenario.

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4. List sources used to prepare your submission.

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Written Analysis Section

Type your analysis (**no more than 3 pages, including the prompt**) in Arial 11-point, single-spaced font, within the brackets following the prompt. If appropriate, you may include tables, charts, graphs, or other diagrams that you have prepared by inserting them into your analysis. However, the total length of your analysis, including any graphic elements, may not exceed 3 pages. The previous pages of instructions and prompts do not count toward your page limit. Your submission cannot contain hyperlinks to any materials.

Prepare an organized, developed analysis of the scenario that you described in Prompt #3 in the Prompt Section to demonstrate the depth of your mathematics subject matter knowledge. In your analysis, make sure to do the following:

1. Create appropriate graphs and/or diagrams, including all proper labels, to model and describe a given real-world situation.

2. Apply appropriate mathematical techniques to make a prediction or comparison regarding the situation.

3. Make a recommendation or argument based on the prediction or comparison.

4. Discuss factors that could influence the accuracy of the prediction/comparison and recommendation/argument.

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