



## INVESTIGATE THE WORLD

*How well does the student use mathematics to model and investigate a given issue, situation, or event?*

- **MATH6-8.INV1.MODEL.** Designs a mathematical model to illustrate a situation or to diagram a problem, or applies a model that has been successful previously in similar situations.
- **MATH6-8.INV2.RLTNS.** Describes how the mathematical relationships in a model reflect a situation or the elements of a problem, or predicts when and/or how a model could be generalized to similar situations.
- **MATH6-8.INV3.RPRSN.** Distinguishes between appropriate mathematical tools, procedures, and representations to explore the issue, situation, or event and can articulate why a particular tool or procedure was selected.
- **MATH6-8.INV4.SELEC.** Generates a range of appropriate strategies and differentiates between applicability of the strategies to the given situation.
- **MATH6-8.INV5.STRTG.** Selects and applies a reasonable strategy to verify the solution and differentiates appropriateness of possible strategies.

## RECOGNIZE PERSPECTIVES

*How well does the student recognize the impact of his/her mathematical analyses on themselves and others?*

- **MATH6-8.PERS1.ARGUE.** Draws a conclusion or generates an incomplete argument to justify a conclusion only partially supported by the mathematical data or information.
- **MATH6-8.PERS2.VRIFY.** Seeks external validation or verification of results of independent work or collaboration and outlines conclusions or processes needing verification.
- **MATH6-8.PERS3.IMPLC.** Expresses and evaluates some implications of a conclusion, conjecture, or argument arising from a mathematical model or process and uses data or information from the model as support.
- **MATH6-8.PERS4.PERSP.** Recognizes, articulates, and addresses different perspectives using precise mathematical language when appropriate.
- **MATH6-8.PERS5.POSTN.** Articulates a valid conjecture that reflects the mathematical process procedure model that results in a mathematically valid conclusion and engages in mathematical discourse to justify conjecture.

## COMMUNICATE IDEAS

*How clearly and accurately does the student communicate and defend his/her mathematical thinking, approaches, representations, solution, and decisions?*

- **MATH6-8.COMM1.COMM.** Explains and justifies complex mathematical reasoning, concepts, procedures, and relationships using precise mathematical language in a way that is mostly organized and sequenced.
- **MATH6-8.COMM2.DEFNS.** Defends a conclusion, conjecture, decision, or argument with some mathematical concepts, procedures, or data from the model using precise mathematical language.
- **MATH6-8.COMM3.SYMBL.** Decontextualizes a mathematical idea using mathematical terms, symbols, and conventions, and begins to contextualize by some evaluation of the process using mathematical language.
- **MATH6-8.COMM4.GRAMM.** Engages in clear oral and written mathematical discourse using mathematical terminology, symbols, and conventions correctly and generally free of distracting errors in grammar, usage, and punctuation.
- **MATH6-8.COMM5.MEDIA.** Selects an appropriate medium and uses it in an effective way to communicate mathematical ideas.

## TAKE ACTION

*How well does the student advocate for, engage in, and reflect on plausible and responsible actions that are supported by his/her mathematics?*

- **MATH6-8.ACT1.ADVCT.** Advocates for a course of action that is plausible, responsible, and supported by mathematics.
- **MATH6-8.ACT2.ACTN.** Identifies a plan of action supported by the mathematics that is mostly viable, manageable, and/or responsible that is related to the conclusion, argument, or decision.
- **MATH6-8.ACT3.IMPRT.** Describes the importance of the plan of action, with some connection to the global community, supported by the data or conclusions.