Expectation

2.2 The student will apply geometric properties and relationships to solve problems using tools and technology when appropriate.

Essential Questions

How are the foundations of logical reasoning used to develop and prove conjectures?

How does the application of logical reasoning facilitate understanding geometric relationships?

Enduring Understanding

Valid inductive and deductive reasoning are used to develop and prove conjectures.

Indicators

2.2.3 use inductive or deductive reasoning.
- 2.2.3.a define and apply deductive reasoning.
- 2.2.3.b define and apply inductive reasoning.
- 2.2.3.c distinguish between inductive and deductive reasoning.
- 2.2.3.d develop direct proofs using a paragraph, flowchart, or 2-column format.
- 2.2.3.e develop indirect proofs using a paragraph or 2-column format.

2.2.3.2 construct a logical argument.
2.2.3.3 *determine the validity of a logical argument using truth tables.*
2.2.3.4 solve problems deductively or inductively using the structure of logic.
2.2.3.5 write and interpret conditional statements including the converse, inverse, and contrapositive.