Use the following spaces to record any information about key topics that you find useful.

Axiom. *A rational number, is defined to be a number that can be expressed as the ratio of two integers in which the denominator is non-zero.*

$\Rightarrow$ Proof by contrapositive:

Defined by which logical equivalence:

Theorem. *The square root of a positive real number is irrational if the number is irrational.*

Proof.

Hypothesis: _____

Conclusion: _____

□

$\Rightarrow$ Proof by contradiction:

Defined by the logical equivalence: $p \to q \equiv \neg(p \to q) \to \mathrm{F}$.

Confirm this in the space below.

Theorem. *For all even integers n, n^2 is a multiple of 4.*

Proof.

Hypothesis: _____

Conclusion: _____

□