GEOMETRY

2.1 Patterns and Inductive Reasoning

Example: Complete the pattern and give the rule to get to the next number.

(1) 1, 4, 16, 64,…

(2) -5, -2, 4, 13,…

Inductive Reasoning –

Conjecture –

Example: The sum of the first n odd integers is _____?

Counterexample – Example that shows a _____ is false.

Example: For all numbers x, the expression $x^2 \geq x$.

Examples – State the next number in the pattern and give the rule that was used.

(1) 1, 4, 7, 10, …

(2) 7, 9, 13, 19, 27, …

(3) 3, 18, 108, 648, …

(4) 4, 6, 9, 13.5, 20.25, …

Complete the conjecture

(1) The sum of any two odd numbers is _____

(2) The product of any two odd numbers is _____