Geometry 2.1

Name: ___________________

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To be used with Larson Geometry, 2011

2.1 Use Inductive Reasoning

Conjecture and Inductive Reasoning

Conjecture
• ________________ statement based on ________________

Inductive Reasoning
• First find a ________________ in ________________ cases
• Second write a ________________ for the ________________ case

Sketch the fourth figure in the pattern

![Pattern Image]

Describe the pattern in the numbers 1000, 500, 250, 125, ... and write the next three numbers in the pattern

Given the pattern of triangles below, make a conjecture about the number of segments in a similar diagram with 5 triangles

![Triangle Pattern Image]

Make and test a conjecture about the product of any two odd numbers

Proving by Inductive Reasoning

The only way to show that a conjecture is true is to ________________

To show a conjecture is false is to show ________________ where it is false
• This case is called a ________________

Find a counterexample to show that the following conjecture is false
The value of $x^2$ is always greater than the value of $x$

Assignment: 75 #5, 6-18 even, 22-28 even, 32, 34, 38-46 even, 47-49 all = 22 total

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