

# Geometry

## 2.2A 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



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



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  $x$