Conjecture
an educated guess after looking at a specific situation

Situation: Donnie made a 42 on his last geometry test.

    Conjecture:

    Conjecture:

Situation: Tyler High School defeated James High School in last night's basketball game.

    Conjecture:

    Conjecture:

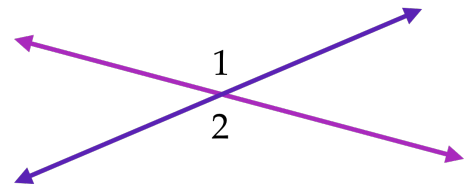   Given a specific situation, we can make conjectures about that situation.

Conjecture
an educated guess after looking at a specific situation

Situation: ∠1 and ∠2 are vertical angles.

    Conjecture:
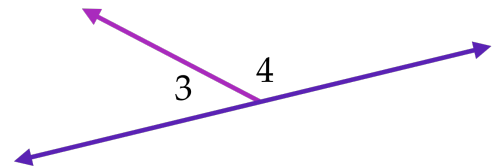
    Conjecture:

Situation: ∠3 and ∠4 are adjacent angles

    Conjecture:

    Conjecture:

Looking at several specific situations to come up with a conjecture is called...

Inductive Reasoning

Situation:
Dunn Brothers Coffee Shop offers free WiFi.
Starbuck's Coffee Shop offers free WiFi.
Saxby's Coffee Shop offers free WiFi.
Barnes and Noble Coffee Shop offers free WiFi.

Inductive Reasoning tells us...

Conjecture:

Looking at several specific situations to come up with a conjecture is called...

Inductive Reasoning

Situation:
Ford trucks have four wheels
Chevrolet trucks have four wheels
Toyota trucks have four wheels
Nissan trucks have four wheels

Inductive Reasoning tells us...

Conjecture:
All trucks have four wheels

Looking at several specific situations to come up with a conjecture is called...

Inductive Reasoning

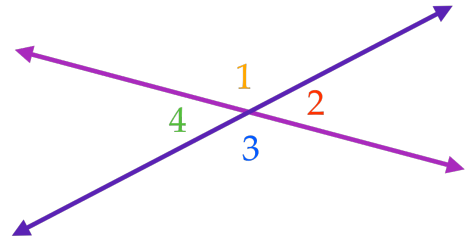Situation:

∠1 and ∠2 are adjacent angles and form a linear pair
∠2 and ∠3 are adjacent angles and form a linear pair
∠3 and ∠4 are adjacent angles and form a linear pair
∠1 and ∠4 are adjacent angles and form a linear pair

Inductive Reasoning tells us...

Conjecture:

Note: not all conjectures are necessarily true

Looking at several specific situations to come up with a conjecture is called...
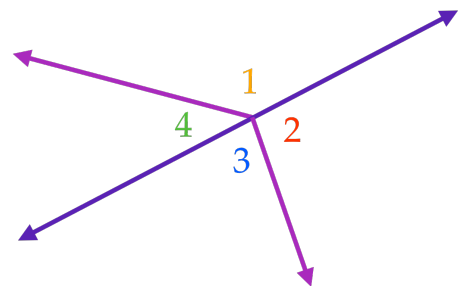
Inductive Reasoning

Situation:

∠1 and ∠2 are adjacent angles and form a linear pair
∠2 and ∠3 are adjacent angles and form a linear pair
∠3 and ∠4 are adjacent angles and form a linear pair
∠1 and ∠4 are adjacent angles and form a linear pair

Inductive Reasoning tells us...

Conjecture:
All adjacent angles form a linear pair

∠1 and ∠2 are adjacent angles
but do not form a linear pair
Counterexample

Note: not all conjectures are necessarily true

Given the following situation, determine if the conjecture is TRUE or FALSE.
If FALSE, give a counterexample.

Situation: Points A, B, and C are in the same plane.

Conjecture: Points A, B, and C are collinear.

Can we make this TRUE?   Can we make this FALSE?

Given the following situation, determine if the conjecture is TRUE or FALSE.
If FALSE, give a counterexample.

Situation: $\overline{AB}$ and $\overline{CD}$ intersect at point X.

Conjecture: $\overline{AX} \cong \overline{XB}$ and $\overline{CX} \cong \overline{XD}$

Can we make this TRUE?   Can we make this FALSE?

Given the following situation, determine if the conjecture is TRUE or FALSE.
If FALSE, give a counterexample.

Situation: $ABCD$ is a rectangle.

Conjecture: $AB = CD$ and $AD = CB$

Can we make this TRUE?   Can we make this FALSE?