11 - 3
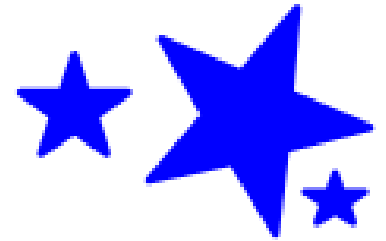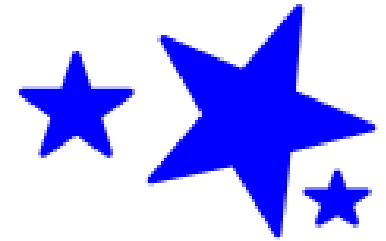# Deductive Reasoning

conditional statement: "if – then"

(Hypothesis : if)

(conclusion: then)
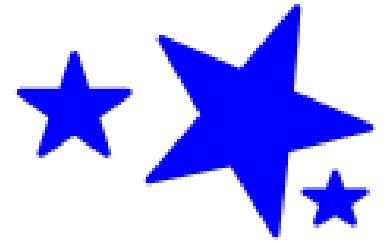
Ex: If it rains, then we will not go to the park.

Ex: The football team will make the playoffs if they go 10-0.

Hypothesis: blue   *Conclusion: red*
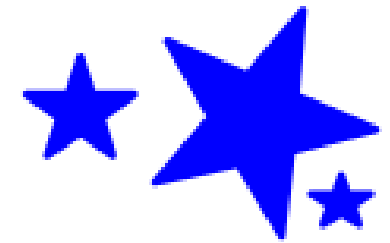
Some statements are either
TRUE or FALSE.

Ex: If a number is divisible by 10,
then it is divisible by 5.

true

Ex: If a number is divisible by 5,
then it is divisible by 10.

false (5,10,15,etc.)

If we are given that the hypothesis is true, then we know that the conclusion is valid.

If we are given that the conclusion is true, we can NOT go backwards and assume that the hypothesis is true.

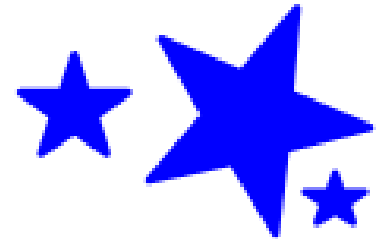**Ex:** Conditional: If I do my homework by 6:00pm, then I can go to a movie.

Given: I did my homework by 6:00pm.

Conclusion: I can go to a movie.

Valid
  H is true, so C follows

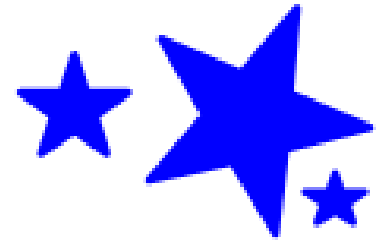**Ex:** **Conditional: If an animal is a cat, then it loves tuna.**

Given: Fido loves tuna.

Conclusion: Fido is a cat.

invalid

Given C, can't assume H.

Homework:

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