Geometry

2.3 Apply Deductive Reasoning

# Deductive Reasoning

Laws of logic

properties

facts

definitions

Use \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to form an argument.

Deductive reasoning

Always

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ true

specific

General

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inductive reasoning

Sometimes

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ true

Specific

general

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Laws of Logic

## Law of Detachment

true

conclusion

true

hypothesis

If the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a true conditional statement is \_\_\_\_\_\_\_\_\_, then the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is also \_\_\_\_\_\_\_\_\_\_\_\_.

Taken apart

Comes apart

Detach means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, so the 1st statement is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. If **we confess our sins**, he is faithful and just to forgive us our sins. 1 John 1:9
2. **We** **confess our sins**
3. He is faithful and just to forgive us our sins
4. If you love me, keep my commandments.
5. I love God.

I keep the commandments

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. If you love me, keep my commandments.
3. I keep all the commandments.

Not valid

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Law of Syllogism

q

p

If hypothesis \_\_\_\_\_\_, then conclusion \_\_\_\_\_\_.

r

q

If these statement are true,

If hypothesis \_\_\_\_\_\_, then conclusion \_\_\_\_\_\_.

r

p

then this statement is true

If hypothesis \_\_\_\_\_\_, then conclusion \_\_\_\_\_\_.

1. If we confess our sins**, He is faithful and just to forgive us our sins.**
2. **If He is faithful and just to forgive us our sins**, then we are blameless.
3. If we confess our sins, then we are blameless.
4. If you love me, keep my commandments.
5. If you keep my commandments, you will be happy.

If you love me, then you will be happy.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. If you love me, keep my commandments.
3. If you love me, then you will pray.

Not valid

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Assignment: 90 #4-12 even, 16-28 even, 30-38 all = 20 total

Extra Credit: 93 #2, 4 = +2 total