

Deductive Reasoning
What is it?

Sep 20-11:29 AM

<http://mrseteachesmath.blogspot.com/2014/10/law-of-syllogism-and-direct-tv.html>

Sep 24-9:21 AM

There are 2 laws of deductive reasoning:

1. Law of Detachment

http://www.virtualnerd.com/tutorials/?id=Geo_02_01_0014

2. Law of Syllogism

<https://www.youtube.com/watch?v=YBNrkXEgCil>

Sep 20-11:39 AM

Law of Detachment:

1. If you have a true conditional,
2. and the hypothesis is true.
3. Then the conclusion has to be true.

Ex. If the PS Geom. students are quiet, then Mrs. K is happy.

The Geometry students were quiet Monday.

Conclusion: Mrs. K is happy.

Sep 20-11:40 AM

Not correct!

If you don't have a clear or mesh backpack,
then you will be sent to your locker.

Jimmy was sent to his locker.

Jimmy didn't have a clear/mesh backpack.

Sep 20-11:44 AM

Law of Syllogism

1. if $p \rightarrow q$ is a true conditional.
2. and $q \rightarrow r$ is a true conditional.
3. then $p \rightarrow r$ is true.

Ex. If Twenty One Pilots comes to town, then I will go to their concert.

If I go to their concert, then I need to save my money for a ticket.

If Twenty One Pilots comes to town, then I need to save money for a ticket.

Sep 20-1:12 PM

Using the law of syllogism, determine the conclusion.

Ex. If Pete's thirsty, he'll want to drink an Ice water.
If Pete wants to drink an Ice water, he will need to get a dollar.

Conclusion??????????

Sep 20-1:30 PM

Using the law of syllogism, determine the conclusion.

Ex. If you eat M&M's, then you like chocolate.
If you like chocolate, then you like Hershey candy bars.

Conclusion??????????

Sep 20-1:30 PM

Write a conclusion using the true statements. If no conclusion possible, write *no conclusion*.

1. If Lisa gets stung by a bee, then she will get ill. If she gets very ill, then she will go to the hospital. Lisa got stung by a bee.

2. If you skip class, then you will receive a detention. You skipped class.

3. If Jay doesn't work hard, then he won't start the game and will quit the football team. Jay quit the team.

Sep 20-1:33 PM

Assume the following statements are true.

- If Susan screams, then the dog runs away.
- If the dogs licks Susan, then Susan will scream.
- If Carl tells the dog to "kiss", then the dog will lick Susan.
- Carl tells the dog to "kiss."



1. Did the dog lick Susan? Explain.

2. Did the dog run away? Explain.



Sep 20-1:38 PM

Write a conclusion using the true statements. If no conclusion is possible, write *no conclusion*.

1. If it is 6 pm, then Dairy Queen is open. If Dairy Queen is open, Curtis will buy an Oreo blizzard.

Conclusion?

2. If it is Wednesday, Paula is working at Fleet Farm. It's Wednesday.

Conclusion?

3. If you are out past curfew, then your parents will be upset. If your parents get upset, then you are grounded.

Conclusion?

4. If you are 16, then you have a driver's license. Emma has a driver's license.

Conclusion.

Sep 19-9:52 AM

5. If the roads are icy, then driving conditions are hazardous. Driving conditions are hazardous.

Conclusion?

6. If a number ends in 0, then it is divisible by 10. If a number is divisible by 10 it is divisible by 5.

Conclusion?

Sep 22-2:30 PM