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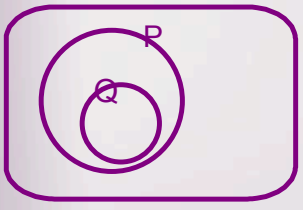
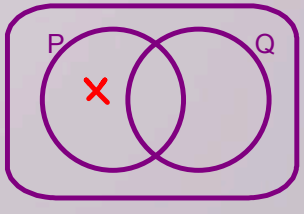


Math 1030 #2b

Analyzing Arguments

Testing Validity



Conditional Statement:

If p, then q

p and q are phrases

p is called the hypothesis

q is called the conclusion

Four Basic Conditional Arguments

(1) Affirming the hypothesis

if p then q
p is true

q is true

(2) Affirming the conclusion

if p then q
q is true

p is true

(3) Denying the hypothesis

if p then q
p is not true

q is not true

(4) Denying the conclusion

if p then q
q is not true

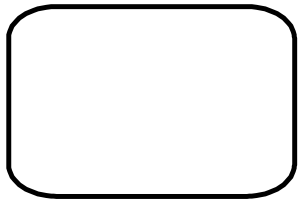
p is not true

EX 1:

Categorize these arguments and state whether they are valid.

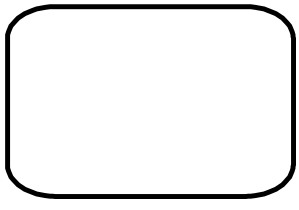
a) p: If it is a bird, the young hatch from eggs.
p: Condors are birds.

c: Condor chicks are hatched from eggs.



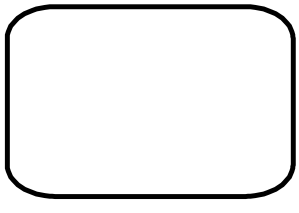
b) p: If we can put a man on the moon, we can build a working computer system.
p: We can build a computer operating system that works.

c: We can put a man on the moon.



c) p: If a figure is a quadrilateral, it has four sides.
p: Triangles are not quadrilaterals.

c: Triangles do not have four sides.



d) p: If you get at least a C in your math class, you may drive my car.
p: You are not driving my car

c: You did not get a C in math.