9-20-13
5th Geo

If p: you are nice, then
q: you have a lot of friends.

$p \to q$ (p implies q)
(if p, then q)

p: you are 17
q: you can see an R rated movie.

what would represent:
"If you can't see an R rated movie, then you are not 17."

$\sim q \to \sim p$

a: you can't come over
b: your name is Debbie

Translate "If your name is Debbie, you can come over."

$b \to \sim a$

$\therefore$ → therefore

Let p: $x^2 = 49$
q: x is not an irrational number

Translate: "If x is an irrational number, then $x^2 \neq 49$."

$\sim q \to \sim p$

p: $\angle A$ is acute

q: $\angle B$ is acute

r: $\angle C$ is obtuse

Translate

① If $\angle B$ isn't acute, then $\angle C$ is obtuse.

$\sim q \rightarrow r$

② $\angle C$ is obtuse. Therefore, $\angle A$ isn't acute.

$r \therefore \sim p$

③ If $\angle A$ is acute AND $\angle B$ is acute OR $\angle C$ is obtuse, then $\angle A$ isn't acute.

$p \wedge q \vee r \rightarrow \sim p$

$\wedge$ and

$\vee$ or

9-20-13

6th Geo

If you are pretty, then you get a discount.

p: you are pretty

q: you get a discount

$p \rightarrow q$

Read p implies q

OR

If p, then q.

p: you are nice

q: you are a boy

What represents

"If you are not a boy, then you are nice."

$\sim q \rightarrow p$

Not: $\sim$

Therefore: $\therefore$

AND: $\wedge$

OR: $\vee$

p: you are 10

q: you stink

r: you like pickles

Translate:

"If you stink and you are 10, then you like pickles. Therefore, you are not 10."