Name: _____   CompID: _____

CS 2102 - DMT1 - Fall 2019 — Luther Tychonievich
Administered in class friday september 20, 2019

Quiz 03

PROBLEM 1 *Symbolizing*

For each of the following, convert from text to symbolic logic. The first one is done for you.

- No G are F. All H are G. So: No H are F

    $\nexists x . G(x) \wedge F(x)$

    $\forall x . H(x) \rightarrow G(x)$

    $\therefore \quad \nexists x . H(x) \wedge F(x)$

- No G are F. Everything is F. So: Nothing is G

- All G are F. Something is G. So: Some G is F

PROBLEM 2 *Symbolizing with a Key*

Using this symbolization key:
  domain: all animals
    $A(x)$: ____$_x$ is an alligator
    $M(x)$: ____$_x$ is a monkey
    $Z(x)$: ____$_x$ lives at the zoo
    $L(x,y)$: ____$_x$ loves ____$_y$
      a: Artist
      b: Bouncer
      c: Champion
  Symbolize each of the following sentences; the first one is done for you.

If both Bouncer and Champion are alligators, then Artist loves them both.

$$\big(A(b) \land A(c)\big) \to \big(L(a,b) \land L(a,c)\big)$$

There are no monkeys at the zoo.

Bouncer loves every animal that loves Bouncer.

Artist and Champion don't love any of the same animals.