

### 5.4.1. Name, Predicate, and Quantifier Translation: Simple Problems

A. Use the following translation table to translate each English sentence into formal language.

#### Translation Table:

A: Mount Everest	G: __ is impressive
B: The Cathedral of Learning	H: __ is made of limestone
C: Logicpalooza	I: __ is a physical object
	J: __ is a festival
	K: __ lasts forever

#### Sentences:

1. If Mount Everest isn't impressive, then nothing is.
2. Not everything is made of limestone, but the Cathedral of Learning is.
3. Mount Everest is impressive, but some things aren't.
4. If the Cathedral of Learning is made of limestone, then something is made of limestone.
5. If Logicpalooza is a festival and nothing lasts forever, then  
Logicpalooza is a festival which doesn't last forever.
6. Something is impressive if and only if not everything is unimpressive.
7. If anything is impressive, the Cathedral of Learning is.
8. If everything is impressive, the Cathedral of Learning is.

*(Are (7) and (8) translated the same way? Do they mean the same thing?)*

**B.** Use the translation table given below to **translate** each of the following English arguments into formal language.

**Translation Table:**

**A:** Mount Everest

**B:** Neko

**C:** Rex

**G:** \_\_\_ is made of matter

**H:** \_\_\_ is a building

**I:** \_\_\_ is a cat

**Arguments:**

- (1) 1. Either everything is made of matter, or nothing is.  
2. Mount Everest is made of matter.  
\_\_\_\_\_

∴ Everything is made of matter.

- (2) 1. Neko isn't a building made of matter.  
\_\_\_\_\_

∴ Not everything is made of matter.

- (3) 1. Not everything is made of matter  
\_\_\_\_\_

∴ Something isn't made of matter.

- (4) 1. If Rex is a cat then something is a cat, and if Neko is a cat  
then something is a cat.  
\_\_\_\_\_

∴ If either Rex or Neko is a cat, then something is a cat.

*(Question: do any of these arguments strike you as valid?)*