

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

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

A: The Cathedral of Learning

B: Logicpalooza

C: Kinkakuji

G: ___ is made of limestone

H: ___ is a festival

J: ___ lasts forever

K: ___ is impressive

1. Though not everything is made of limestone, the Cathedral of Learning is.

2. Though nothing is made of limestone, the Cathedral of Learning is.

(Do 1 and 2 mean the same thing? Are they translated the same way?)

3. If the Cathedral of Learning is made of limestone, then something is made of limestone.

4. If Logicpalooza is a festival and nothing lasts forever, then Logicpalooza is a festival which doesn't last forever.

5. Something is impressive if and only if not everything is unimpressive.

6. Kinkakuji is impressive, though some things aren't.

7. If Kinkakuji isn't impressive, then nothing is.

8. If anything is impressive, Kinkakuji is.

(Do 7 and 8 mean the same thing?)

9. If everything is impressive, Kinkakuji is.

(Do 8 and 9 mean the same thing? Are they translated the same way?)

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

A: Mount Everest

B: Neko

C: Rex

G: ___ is made of matter

H: ___ is a building

I: ___ is a cat

- (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.

(Do any of these arguments seem valid?)