

5.7.1. 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: Blazing Cat

G: ___ is made of limestone

H: ___ is a festival

J: ___ lasts forever

K: ___ is impressive

1. Though not everything's made of limestone, the Cathedral of Learning is.
2. Though nothing is made of limestone, the Cathedral of Learning is.
(Are 1 and 2 translated the same way? Do they mean the same thing?)
3. If the Cathedral of Learning is made of limestone, then something's made of limestone.
4. If Blazing Cat is a festival and nothing lasts forever, then
Blazing Cat is a festival which doesn't last forever.
5. Something is impressive if and only if not everything is unimpressive.
6. The Cathedral of Learning is impressive, though some things aren't.
7. If the Cathedral of Learning isn't impressive, then nothing is.
8. If anything is impressive, the Cathedral of Learning is.
(Do 7 and 8 mean the same thing?)
9. If everything is impressive, the Cathedral of Learning is.
(Do 8 and 9 mean the same thing? Are they translated the same way?)

If cannon bowling is illegal everywhere, then it's not legal anywhere.

If everyone can solve the problem, then Lucretia can.

If anyone can solve the problem, Lucretia can.

If anyone can solve the problem, Lucretia can. But no one can solve the problem. (\therefore) Lucretia can't solve the problem.

Someone's a goth, but someone's not.

Not everybody owns a surfboard, but Jack does.

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

a: Suki Style Bar

b: Letitia

c: Lucretia

G: __ is a building

H: __ is made of matter

I: __ is a goth

- (1) 1. Either everything's made of matter or nothing is.
2. Suki Style Bar is a building made of matter.

∴ Everything's made of matter.

- (2) 1. Letitia 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 Letitia's a goth then something's a goth, and
if Lucretia's a goth then something's a goth.

∴ If either Letitia or Lucretia is a goth then something's a goth.

(Do any of these arguments seem valid?)