

Chapter Three Translation Problems: Set 4

Group A. Translate each of the following English sentences into the formal language.

1. Suki will eat beef, but Neko won't.
(P: Suki will eat beef. Q: Neko will eat fish.)
2. They won't hold the reptile rodeo unless the weather improves.
(P: They will hold the reptile rodeo. Q: The weather improves.)
3. Either the results are atypical, or the experiment has failed to confirm our hypothesis.
(P: The results are typical. Q: The experiment has confirmed our hypothesis.)
4. Both the picnic and the boat race will be held, although the weather isn't sunny.
(P: The picnic will be held. Q: The boat race will be held. R: The weather is sunny)
5. Rex will not fail to appear at his bond hearing, even though he's irresponsible.
(P: Rex will appear at his bond hearing. Q: Rex is irresponsible.)

Group B. For each pair of English sentences, translate both sentences into formal language, and then decide: do we translate both English sentences as **the same formal sentence**, or as two **different** formal sentences?

- (1a) It's not raining unless it's cloudy
- (1b) Either it's not raining, or it's cloudy.
(P: It's raining. Q: It's cloudy)
- (2a) Either it's raining or it isn't.
- (2b) Either it's not failing to rain, or it's not raining.
(P: It's raining)

(3a) We'll have ice cream but we won't have cake.

(3b) We'll have ice cream even though we will fail to have cake.

(P: We'll have ice cream. Q: We'll have cake)

(4a) The argument is convincing unless it's invalid.

(4b) Either the argument is convincing, or it's not valid.

(P: The argument is convincing. Q: The argument is valid)

Group C. Translate each of the following English sentences into the formal language.

1. Jack will neither eat turkey nor drink whiskey.

(P: Jack will eat turkey. Q: Jack will drink whiskey.)

2. Suki won't attend the meeting, unless neither Ace nor Rex are coming to work.

(P: Suki will attend the meeting. Q: Ace is coming to work. R: Rex is coming to work)

3. Buck is a dog who isn't a dog.

(P: Buck is a dog)

4. Rex will not pass the exam unless he's a genius who doesn't need to study.

(P: Rex will pass the exam. Q: Rex is a genius. R: Rex needs to study)

5. Rex passed Chemistry without passing Chemistry.

(P: Rex passed Chemistry)

6. Ace passed Chemistry, and he did so without studying.

(P: Ace passed Chemistry. Q: Ace studied)

7. Slim is a therapist who practices medicine without having a license.

(P: Slim is a therapist. Q: Slim practices medicine. R: Slim has a license)