

Exercises for 1.1 through 1.4

1. Which of the following are sentences in the sense used in this course?
 - (a) Who wants to live forever?
 - (b) I wonder whether anyone wants to live forever.
 - (c) Life might have existed on Mars.
 - (d) If God is dead, what is the point of morality?
 - (e) If it is true that God is dead, what is the point of morality?
 - (f) Can you close the window for me?
 - (g) I would like you to close the window.
 - (h) Please close the window.

Answer Key

b, c, g

2. Characterize each of the following as a compound of two atomic sentences (there might be multiple ways of doing it).

- Some countries are resource rich and some other countries are resource poor.
- Venus shares many characteristics with Earth but Venus is uninhabitable.
- If you have taken PHIL60, then you have fulfilled the Area 5 requirement.
- The Taj Mahal is a much admired architectural complex but some people consider it kitschy and some politicians claim that it does not represent Indian culture.

Answer Key

- $\langle \text{Some countries are resource rich} \rangle$ and $\langle \text{some other countries are resource poor} \rangle$.
- $\langle \text{Venus shares many characteristics with Earth} \rangle$ but $\langle \text{Venus is uninhabitable} \rangle$.
- $\langle \text{If you have taken PHIL60} \rangle$, then $\langle \text{you have fulfilled the Area 5} \rangle$

requirement).

- (a) \langle The Taj Mahal is a much admired architectural complex \rangle but \langle some people consider it kitschy and some politicians claim that it does not represent Indian culture \rangle .

OR:

- (b) \langle The Taj Mahal is a much admired architectural complex but some people consider it kitschy \rangle and \langle some politicians claim that it does not represent Indian culture \rangle .

3. Sometimes a sentence that does not look like a compound sentence can be reformulated as a compound sentence. E.g., “Marie Curie was a Polish scientist” can be reformulated as “Marie Curie was Polish and Marie Curie was a scientist”. Turn each of the following into a compound sentence with two atomic sentences.

- (a) Tokyo in the summer is hot and humid.
- (b) Cuneiform was used to write Sumerian as well as Akkadian.
- (c) The Holy Roman Empire was neither holy nor Roman.
- (d) The culprit was the butler or the cook.
- (e) You can satisfy the Area 5 requirement by taking logic or by taking calculus.

Answer Key

- (a) \langle Tokyo in the summer is hot \rangle and \langle Tokyo in the summer is humid \rangle .
- (b) \langle Cuneiform was used to write Sumerian \rangle and \langle cuneiform was used to write Akkadian \rangle .
- (c) \langle The Holy Roman Empire was not holy \rangle and \langle the Holy Roman Empire was not Roman \rangle .
- (d) \langle The culprit was the butler \rangle or \langle the culprit was the cook \rangle .
- (e) \langle You can satisfy the Area 5 requirement by taking logic \rangle and \langle you can satisfy the Area 5 requirement by taking calculus \rangle .

Note on (e):

Original: You can satisfy the Area 5 requirement by taking logic or by taking calculus.

A: You can satisfy the Area 5 requirement by taking logic

B: you can satisfy the Area 5 requirement by taking calculus

A	B	$A \text{ or } B$	A	B	$A \text{ and } B$	A	B	Orig.
T	T	T	T	T	T	T	T	T
F	T	T	F	T	F	F	T	F
T	F	T	T	F	F	T	F	F
F	F	F	F	F	F	F	F	F

The third table gives the natural understanding of the original and it is the same as $\langle A \text{ and } B \rangle$, not $\langle A \text{ or } B \rangle$.

4. State the truth conditions for $\langle \text{neither } A \text{ nor } B \rangle$ in table form.

	A	B	$\text{neither } A \text{ nor } B$
Answer Key	T	T	F
	F	T	F
	T	F	F
	F	F	T

5. State the truth conditions for $\langle A \text{ but not } B \rangle$ in table form.

	A	B	$A \text{ but not } B$
Answer Key	T	T	F
	F	T	F
	T	F	T
	F	F	F