Intro to Linguistics – HW 1 – Phonology

Consider the following German words:

[bux]	*Buch* 'book'	[kuxən]	*Kuchen* 'cake'
[miç]	*mich* 'me'	[milç]	*Milch* 'milk'
[kɔxən]	*kochen* 'to cook'	[feçər]	*Fächer* 'fan'
[bɑx]	*Bach* 'brook'	[nɑxt]	*Nacht* 'night'
[medçən]	*Mädchen* 'girl'	[ɑxt]	*acht* 'eight'
[lɔx]	*Loch* 'hole'	[hoːx]	*hoch* 'high'
[lɑxən]	*lachen* 'laugh'	[ʃprɛçən]	*sprechen* 'speak'
[fluːxt]	*flucht* 'flight'	[ɛlç]	*Elch* 'elk'
[ʃtɔrç]	*Storch* 'stork'	[byːçr]	*Bücher* 'books'
[furçt]	*Furcht* 'fear'	[mɑnçmɑl]	*manchmal* 'sometimes'
[brʊx]	*Bruch* 'break'		

Notes:

- Assume I have provided all relevant data.

- The data are slightly simplified.

- [ɑ] ≠ [a], use the IPA chart to properly interpret all the symbols

- Recall that phonology is concerned with sounds of language; spelling is irrelevant.

Answer the following questions:

1. Are [ç] and [x] allophones of the same phoneme? Why?

2. If yes, write a rule realizing that phoneme. If there are alternative formulations, write the simplest one. First, express the rule in words, then use the formalism we used in class.