10.1

a.

b.

c.

d.

e.

10.2

a.

b.

c. Interpret the sentence as “Not every dragon was keen on Merlin”,

that is to say, there exists one or more dragon that was not keen on Merlin,

thus, we have ,

or , which is basically the same thing.

d. or

\* I read the textbook and saw the different “restricted quantification” and the standard format, I am not sure which format should I use here, I hope the standard one will do.

10.3

a. true, for <Gawaine, Igraine> is in F3(L)

b. false, for <dragon, Lancelot> is not in F3(C)

c. false, for <Elaine> is in F3(M) while <Elaine, Gawaine> is not in F3(L)

d. true, for <Igraine> is in F3(M) and <Igraine, Gawaine> is in F3(L)

e. true, <Lancelot, dragon> is in F3(S), so S(l, d) is true,

there exists no pair like <\_, Elaine> in F3(L), so is true

f. true, there is only one <dragon> in F3(D), and <Lancelot, dragon> is in F3(S),

so is true, for both <Elaine> and <Igraine> in F3(M),

<Lancelot, \_> is in F3(F), so is true

10.4

a.

b.

c.

d.