Landon Leigh

8.1)

a)

    I.   Syntactically invalid and therefore meaningless

    II.   Correctly expresses the sentence

    III.   Syntactically valid but does not express the meaning of sentence

b)

    I.   Correctly expresses the sentence

    II.   Syntactically valid but does not express the meaning of sentence

    III.   Syntactically invalid and therefore meaningless

    IV.   Syntactically invalid and therefore meaningless

c)

    I.   Correctly expresses the sentence

    II.   Correctly expresses the sentence

    III.   Syntactically valid but does not express the meaning of sentence

    IV.   Syntactically valid but does not express the meaning of sentence

d)

    I.   Correctly expresses the sentence

    II.   Correctly expresses the sentence

    III.   Syntactically valid but does not express the meaning of sentence

    IV.   Correctly expresses the sentence

e)

<ol style="list-style-type: upper-roman;">
Correctly expresses the sentence
Syntactically valid but does not express the meaning of sentence
Syntactically valid but does not express the meaning of sentence
Syntactically invalid and therefore meaningless

9.10)

In this riddle, that man is my son.

That man = T

So for Brothers and sisters I have none:

Father(x, y) ^ y != me -> false

Father(x, y) ^ y = me -> true

That man's father is my father's son:

∃x ∃y Father(x, T) ^ Father(y, me) ^ Son(x, y)

Father(A, T)

Father(B, me)

Son(A, B)

This shows that "that man" is MY son.