

Name: _____ Signature: _____ Student Number: _____

1. Let E and T and W represent the following propositions.

E : Your laptop's warranty has expired.

T : You have tampered with the electronics in your laptop.

W : Your laptop is covered by its warranty.

Translate the following statements into propositional logic.

- (a) Your laptop is covered by its warranty as long as the warranty has not expired and you have not tampered with the laptop's electronic components.

ANSWER:

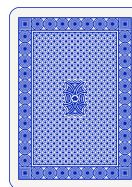
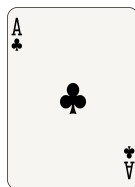
- (b) Your laptop is not covered by its warranty if the warranty has expired or if you have tampered with the laptop's electronic components.

ANSWER:

Which statement would you prefer to see on the box for your new laptop? Why?

ANSWER:

2. Suppose I lay the following four playing cards on the table, each of which comes from either a blue deck or a red deck.



I claim that *every Ace amongst these four cards comes from the blue deck*.

Which card(s) do you need to turn over in order to be certain that I am telling the truth?

ANSWER: