Argument Standards

A. Mark the following as True or False:

1. Every argument with a false conclusion is invalid. T / F
2. Every argument with a false premise is invalid. T / F
3. Every argument with a false premise and a false conclusion is invalid. T / F
4. Every argument with a false premise and a true conclusion is invalid. T / F
5. Every argument with true premises and a false conclusion is invalid. T / F
6. Every argument with a true conclusion is sound. T / F
7. Every argument with a false conclusion is unsound. T / F

B. Represent these arguments in standard form and then determine whether they are valid and (relative to a context of your choosing) sound.

1. David Letterman is over four feet tall, so he is over two feet tall.
   \[ P_1: \text{DL > 4\)' tall} \]
   \[ C: \text{DL > 2\)' tall} \]
   valid, sound

2. Since Jimmy Carter was president, he must have won an election.
   \[ P_1: \text{JC was president} \]
   \[ C: \text{JC must have won an election} \]
   invalid, unsound

3. If all of Illinois were in Canada, then Chicago would be in Canada. But Chicago is not in Canada. Therefore, not all of Illinois is in Canada.
   \[ P_1: \text{If all of IL were in Canada, then Chicago would be in Canada} \]
   \[ P_2: \text{Chicago is not in Canada} \]
   valid
   sound
   \[ C: \text{Not all of IL is in Canada} \]
4. There can’t be a largest six-digit number, because six-digit numbers are numbers, and there is no largest number.

\[ \text{Invalid unsound} \]

P1. 6-digit numbers are numbers
P2. There is no largest number
C. There can’t be a largest six-digit number.

5. Either you are going to Horrock’s or you’re going to Meijer. You’re going to Horrock’s, so you must not be going to Meijer.

\[ \text{Invalid (given an inclusive reading of 'or')} \]

P1. Either you are going to Horrock’s or you are going to Meijer
P2. You’re going to Horrock’s
C. You must not be going to Meijer

\[ \text{Unsound} \]