Instructions:
a) Identify if the statement is a logical conjunction, negation or both. If it isn’t either of these two, mark it as being atomic.
b) If the statement is compound, separate the sentence into its independent statements and connect them into one long statement using ‘and’ and ‘it is not the case that’, filling in the pronouns for clarity.
c) Assign a capital letter to represent each independent statement.
d) Using only the capital letters from c) and the ampersand symbol (&), and the tilde (~), rewrite b).

Example Problem:
Both Seth and Trevor went to college.
Example Answer:
Seth went to college, and Trevor went to college.
Let S = “Seth went to college.”
Let T = “Trevor went to college.”
S & T.

Example Problem:
Regis did not remember to button his fly before walking on set.
Example Answer:
It is not the case that Regis remembered to button Regis’s fly before walking on set.
Let R = “Regis remembered to button Regis’s fly before walking on set.”
~R.

1. Amber did not have breakfast, but her sister did.
It is not the case that Amber had breakfast, and Amber’s sister had breakfast.
Let A = “Amber had breakfast.”
Let S = “Amber’s sister had breakfast.”
~A & S

2. Tornados and hurricanes both involve strong winds.
Tornados involve strong winds, and hurricanes involve strong winds.
Let T = “Tornados involve strong winds.”
Let H = “Hurricanes involve strong winds.”
T & H

3. Wolves are not invisible.
It is not the case that it is not the case that wolves are visible.
Let V = “Wolves are visible.”
~~V

4. Octopi can escape through small openings, but they can’t spray ink.
Octopi can escape through small openings, and it is not the case that Octopi can spray ink.
Let E = “Octopi can escape through small openings.”
Let I = “Octopi can spray ink.”
E & ~I

5. Both birds and reptiles are non-furry.
It is not the case that birds are furry, and it is not the case that reptiles are furry.
Let B = “Birds are furry.”
Let R = “Reptiles are furry.”
~B & ~R

6. Yellow paint was imprinted on the windows and sidewalk.
Yellow paint was imprinted on the windows, and yellow paint was imprinted on the sidewalk.
Let W = “Yellow paint was imprinted on the windows.”
Let S = “Yellow paint was imprinted on the sidewalk.”
W & S

7. Undeterred by his enemies, Mark unleashed his anger.
It is not the case that Mark is deterred by his enemies, and Mark unleashed his anger.
Let D = “Mark is deterred by his enemies.”
Let A = “Mark unleashed his anger.”
~D & A

8. Kerry and Rick didn’t both show up at the theater.
It is not the case that Kerry showed up at the theater, and it is not the case that Rick showed up at the theater.
Let K = “Kerry showed up at the theater.”
Let R = “Rick showed up at the theater.”
~(K & R)

9. Tricia is under a lot of pressure from her boss and one of her coworkers.
Tricia is under a lot of pressure from her boss, and Tricia is under a lot of pressure from one of Tricia’s coworkers.
Let B = “Tricia is under a lot of pressure from her boss.”
Let C = “Tricia is under a lot of pressure from one of Tricia’s coworkers.”
B & C

10. Ellen is interested, yet uninterested.
Ellen is interested, and it is not the case that Ellen is interested.
Let E = “Ellen is interested.”
E & ~E