Output of Z3 solver

1. Z3 solver gives values of variables which satisfy the conditions mentioned
2. It provides with a single value for a variable
3. This value is also the smallest value near the constraints to satisfy the equation or condition
4. (get-model) is used to obtain values if there exist any
5. If any value does not exist it will generate an error with message model not available
6. (check-sat) is used to see if set of condition is satisfiable
7. (check-sat) returns yes/no answer i.e. sat/un-sat
8. Using (get-model) on a ‘no’ or ‘un-sat’ generates the error

If:

Z3 solver input: X>45

Z3 result: X=46

If:

Z3 solver input: X>50 and Y>60

Z3 result: X=51, Y=61

If:

Z3 solver input: X>50 and Y<60

Z3 result: X=51, Y=59