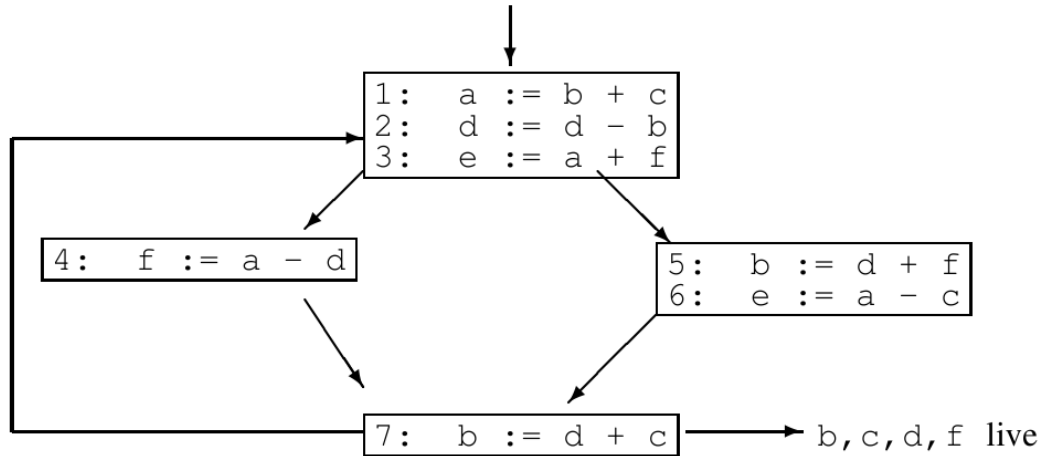


6. (a) For each of the optimisations below, explain what it is and what kind of information needs to be extracted from the program to be optimised:
- i. constant propagation; [5]
 - ii. common sub-expression elimination; [5]
 - iii. dead-code elimination. [5]
- (b) Given the following flow graph:



Calculate live variables at each statement. Explain how you have obtained this information. [10]