

## Quiz 3

27 February 2013

You have up to 25 minutes. You may use a calculator, but no text book or notes.

1. Carefully trace the following algorithm. What does it output? **Be sure to mark a section of your answer as the *output*, separate from your scratch work.**

step 1. Let  $N$  be 8  
step 2. Set  $I$  to 1  
step 3. If  $I > N$  then stop.  
step 4. If  $I < 4$  or  $I$  is odd, then output  $I$   
step 5. Set  $I$  to  $I+1$   
step 6. Go back to step 3.

2. For each type of statement below, indicate which step(s) from the algorithm in question 1 contain that type of statement.
  - a. Output:
  - b. Variable assignment:
  - c. Conditional:
  - d. Loop:

3. Below is an illustration of an array and two other variables. What are the values of each of the following expressions?
- $A[0]$  =
  - $A[X]$  =
  - $A[Y]+1$  =
  - $A[X+1]$  =
  - $A[A[2]]$  =

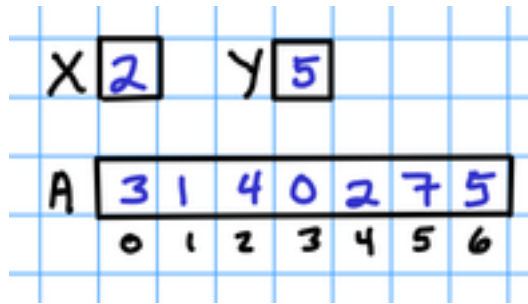


Figure 1: