# Northeastern University

ETC2103 – Homework 2

1. For following example, use a sequence of diagrams like those in the text

(Section 7.4) to trace the action of the run-time stack.

#include <iostream>

void fl(int );

int f2(int p);

int f3(int n);

int main()

{

int a = 5;

f1(a);

cout << endl; *//* A: Return here after f1 finishes

}

//--- Function fl

void fl(int x)

{

cout << f2(x + 1); // B: Return here after f2 finishes

}

//--- Function f2

int f2(int p)

{

int q = f3(p/3); // C: Return here after f3 finishes

return 3\*q + 1;

}

/--- Function f3

int f3(int n)

{

return n\*n + 1;

}