

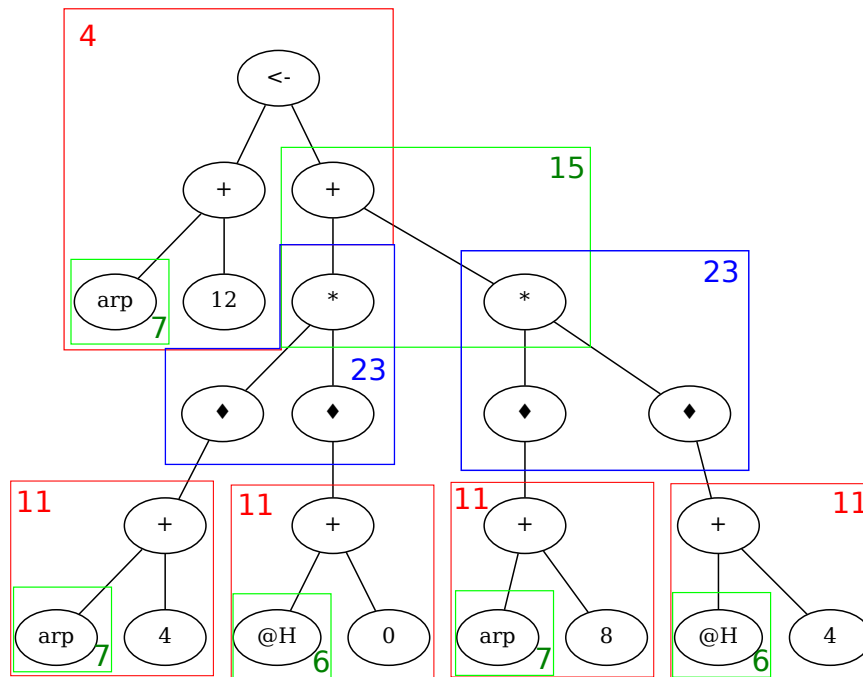
# Homework 8 Solutions

## 1 Call Semantics

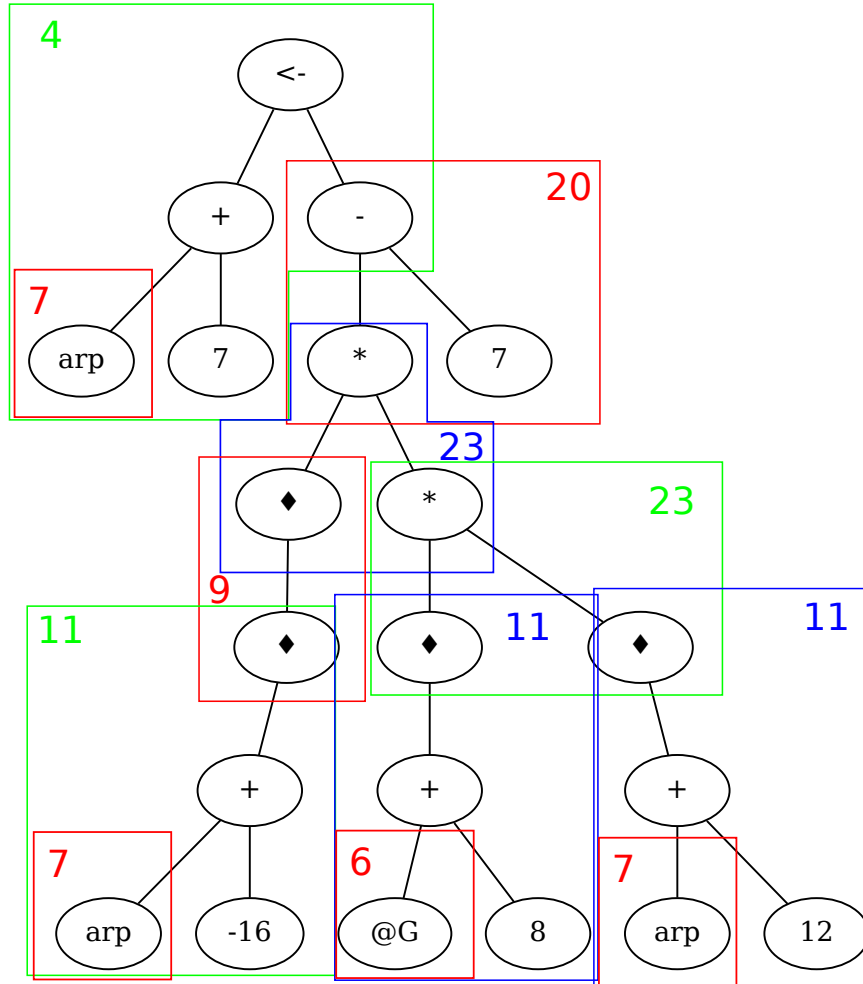
- Output of call-by-value: 5 10 77
- Output of call-by-reference: 9 10 77
- Output of call-by-name: 5 14 77

## 2 Tree Tiling

### 2.1 $y \leftarrow a * b + c * d$



2.2 `w <- x * y * z - 7`



### 3 Forward List Scheduling

#### 3.1 Table

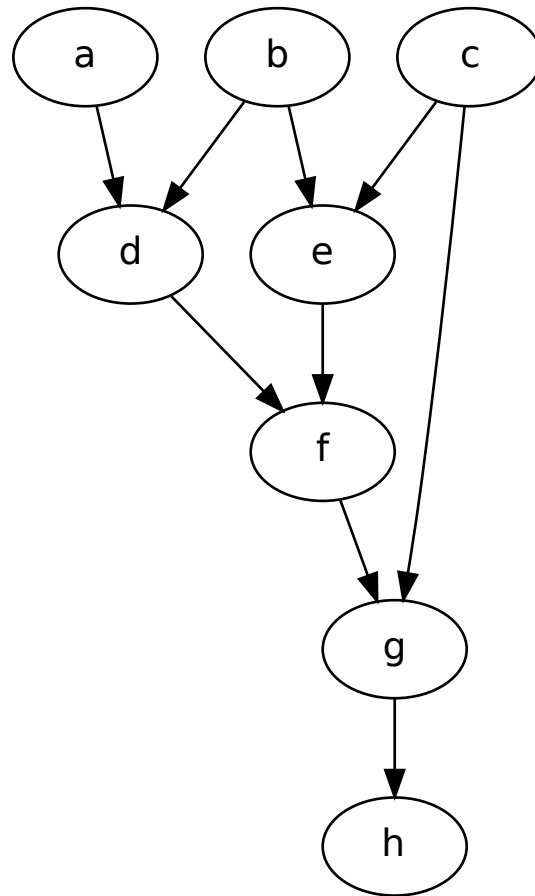
Cycle	Finish	Ready	Start	Active
		a,c,e,g		
1	$\emptyset$	c,e,g	a	a
2	$\emptyset$	e,g	c	a,c
3	$\emptyset$	g	e	a,c,e
4	a	g	b	c,e,b
5	b,c	g	d	e,d
6	e	$\emptyset$	g	d,g
7	d	$\emptyset$	f	g,f
8	$\emptyset$	$\emptyset$	$\emptyset$	g,f
9	g,f	$\emptyset$	h	h
10	$\emptyset$	$\emptyset$	$\emptyset$	h
11	h	$\emptyset$	i	i
12	$\emptyset$	$\emptyset$	$\emptyset$	i
13	$\emptyset$	$\emptyset$	$\emptyset$	i
14	i	$\emptyset$	$\emptyset$	$\emptyset$

#### 3.2 Instruction Order

a,c,e,b,d,g,f,h,i

## 4 Forward List Scheduling II

### 4.1 Dependency Graph



## 4.2 Table

Cycle	Finish	Ready	Start	Active
		a,b,c		
1	$\emptyset$	a,c	b	b
2	$\emptyset$	a	c	b,c
3	b	$\emptyset$	a	c,a
4	c	$\emptyset$	e	a,e
5	a	$\emptyset$	d	e,d
6	e	$\emptyset$	$\emptyset$	d
7	d	$\emptyset$	f	f
8	f	$\emptyset$	g	g
9	g	$\emptyset$	h	h
10	$\emptyset$	$\emptyset$	$\emptyset$	h
11	$\emptyset$	$\emptyset$	$\emptyset$	h
12	$\emptyset$	$\emptyset$	$\emptyset$	h
13	h	$\emptyset$	$\emptyset$	$\emptyset$

## 4.3 Instruction Order

b,c,a,e,d,f,g,h