1.

call by value: 5, 10, 77 ; call by Reference: 8, 10, 77 ; call by name: 5, 10, 77

3.

Start means at the Beginning of the cycle. Finish means at the end of the cycle. Ready means at the beginning of the cycle and Active is at the end of the cycle.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cycle | Start | Finish | Ready | Active |
| 1 | a |  | {a,c,e,g} | {a} |
| 2 | c |  | {c,e,g} | {a,c} |
| 3 | e | a | {e,g} | {c,e} |
| 4 | b | c | {g,b} | {b,e} |
| 5 | g | e | {g} | {b,g} |
| 6 |  | b | {} | {g} |
| 7 | d | g | {d} | {d} |
| 8 |  | d |  | {} |
| 9 | f |  | {f} | {f} |
| 10 |  | f | {} | {} |
| 11 | h |  | {h} | {h} |
| 12 |  | h | {} | {} |
| 13 | i |  | {i} | {} |

Instruction scheduling order:

(a) loadAI rarp, 0 => r1

(c) loadAI rarp, 8 => r3

(e) loadAI rarp, 16 => r5

(b) add r1,r1 => r2

(g) loadAI rarp, 24 => r7

(d) mult r2, r3 => r4

(f) mult r4, r5 => r6

(h) mult r6, r2 => r8

(i) storeAI r8 => rarp, 0

4.

Start means at the Beginning of the cycle. Finish means at the end of the cycle. Ready means at the beginning of the cycle and Active is at the end of the cycle.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Cycle | Start | Finish | Ready | Active | Reason |
| 1 | {b} |  | {a,b,c} | {b} | ImmediateSuccessor(b) = 2  ImmediateSuccessor(c)=2  ImmediateSuccessor(a)=1  #Decendant(b) > #Decendant(c)  LWDR(a)=LWDR(b)=LWDR(c)=10 |
| 2 | {c} | {b} | {a ,c } | {c} | ImmediateSuccessor(c)=2  ImmediateSuccessor(a)=1  LWDR(a)=LWDR(c)=10 |
| 3 | {a} | {c} | {a } |  |  |
| 4 | {e} | {a} | { e} |  |  |
| 5 | {d} | {e} | {d} |  |  |
| 6 |  | {d} |  |  |  |
| 7 | {f} | {f} | {f} |  |  |
| 8 | {g} | {g} | {g} |  |  |
| 9 | {h} |  | {h} |  |  |
| 10 |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  | {h} |  |  |  |

Instruction scheduling order:

(b) loadI 2 => r2

(c) loadI 3 => r3

(a) loadI 1 => r1

(e) mult r2, r3 => r5

(d) mult r1, r2 => r4

(f) add r4, r5 => r6

(g) add r3, r6 => r7

(h) storeAI r7 => rarp, @x