

1. T0,T1,T2,T3,T4,T5, T6 are dead

(1)T0:=3.14 (2)T1:=2*T0 (3)T2:=R+r
(4)A:=T1*T2 (5)B:=A (6)T3:=2*T0
(7)T4:=R+r (8)T5:=T3*T4 (9)T6:=R-r
(10)B:=T5*T6

2. Please **construct the DAG** for the following basic block, and we assume that only variable “M” is live on exit, please optimize the block and **rewrite the block** in optimized code form

E=A+B
F=E-C
G=F*F
H=E-C
I=H-G
J=I+G
M=J*J

3. Please **construct the DAG** for the following basic block, and we assume that only variable “M” is live on exit, please optimize the block and **rewrite the block** in optimized code form.

E=2+3
F=E-C
G=F*F
H=E-C
I=H-G
J=I+G
M=I[J]

4. Please **construct the DAG** for the following basic block, optimize the block and **rewrite the block** in optimized code form. Note that we assume **only Variable M would be used later**

A=B*C
D=B/C
E=A+D
F=2*E
G=B*C
H=G*G
F=H*G
L=F

M=L

5. Please **construct the DAG** for the following basic block, optimize the block and **rewrite the block** in optimized code form. Note that we assume **only Variable G,L,M would be used later**

B=3

D=A+C

E=A*C

F=D+E

G=B*F

H=A+C

I=A*C

J=H+I

K=B*5

L=K+J

M=L