

1. Please **construct the DAG** for the following basic block. We assume that only **variable P be used later**, please optimize the block and **rewrite the block** in optimized code form.

$E = A + B$

$F = A - B$

$G = E * F$

$H = F + G$

$I = F - G$

$L = I + H$

$M = I * I$

$M = 2 * M$

$N = L + M$

$P = N + M$

2. 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 L would be used later**

$A = B * C$

$D = B / C$

$E = A + D$

$F = 2 * E$

$G = B * C$

$H = G * G$

$F = H * G$

$L = F$

$M = L$