TEMA 5

1.
   a. push D
      push C
      sub
      push B
      push A
      sub
      div
      push C
      sub
   b. load A
      sub B
      store R
      load C
      sub D
      store tmp
      load R
      div tmp
      store R
      load C
      sub R
      store R

2.
   a. $10^9 * 0.3 + 2 * (10^9 * 0.1)$ = **$5 * 10^8$ accessos**
   b. Texe = (N * CPI) / f => f = (N * CPI) / Texe = ($10^9 * 2.5$) / 2.5 = **2.5 GHz**
   c. # ins dinámicas = $0.9 * 10^9 * 2 + 0.1*10^9$ = **$1.9 * 10^9$ ins**
   d. f = (N * CPI) / Texe = (1. $9 * 10^9 * 1.2$) / 2.5 = **0.912 GHz**
   e. <u>CISC</u>
      Pfuga = 10 A * 1 V = 10 W
      Pconmutación = $50 * 10^{-9}$ f * $(1V)^2 * 10^9$ Hz = 50 W
      P total = 10 W + 50 W = 60 W
      E = P * t = 60 w * 2.5 s = **150 J**

      <u>RISC</u>
      Pfuga = 8 A * 1 V = 8 W
      Pconmutación = $40 * 10^{-9}$ f * $(1V)^2$ *8.4* 10^8 Hz = 33.6 W
      P total = 8 W + 33.6 W = 41.6 W
      E = P * t = 41.6 w * 2.5 s = **104 J**
   f. Ganancia = 150J / 104 J = 1.44 = **44%**
   g. f = ($1.5 * 10^9 * 1.3$) / 2.5 = **0.78 GHz**
   h. Ptotal = 8 W + ($40*10^9$ f * 1 $V^2 * 7.8 * 10^8$ Hz) = 39.2 W
      E = P * t = 39.2 W * 2.5 s = 98 J
      Ganancia = 150 J / 98 J = 1.53 = **54%**