

Q3.

$\text{threshold} \leftarrow \pi \{ m1.\text{grade} - 3 \}$   
 $(\sigma (m1.\text{cnum} = 'CS240' \wedge m2.\text{cnum} = 'CS240'$   
 $\wedge m1.\text{grade} > m2.\text{grade})$   
 $(\rho_{m1}(\text{mark}) \times \rho_{m2}(\text{mark})))$

$\text{students} \leftarrow \pi \{ s.\text{snum}, s.\text{sname}, s.\text{year} \}$   
 $(\sigma (m.\text{cnum} = 'CS240' \wedge m.\text{snum} = s.\text{snum}$   
 $\wedge m.\text{grade} \geq \text{threshold}))$   
 $(\rho_m(\text{mark}) \times \rho_s(\text{student})))$