Q 2.

$$\left[\pi\{p.pnum, p.pname\}\left(\sigma\left(p.dept \neq 'PM' \wedge p.pnum = c.pnum \wedge c.cnum = 'CS245'\right)\left(\rho_p(professor) \times \rho_c(class)\right)\right)\right]$$

$$-\left[\pi\{p.pnum, p.pname\}\left(\sigma\left(p.dept \neq 'PM' \wedge p.pnum = c.pnum \wedge c.cnum = 'CS245' \wedge m.cnum = c.cnum \wedge m.term = c.term \wedge m.section = c.section\right)\left(\rho_p(professor \times \rho_c(class) \times \rho_m(mark))\right)\right)\right]$$