

# Spring 2012 Final

1:25 B

P2]  $\bar{R}_A = \frac{1}{3}(-23 - 6 + 46)$ ;  $\bar{R}_C = \frac{1}{3}(-47 + 43 + 22)$

(i)  $\text{Var}_A = \frac{1}{3}((-23 - \bar{R}_A)^2 + (-6 - \bar{R}_A)^2 + (46 - \bar{R}_A)^2)$

(ii)  $\text{Var}_C = \frac{1}{3}((-47 - \bar{R}_C)^2 + (43 - \bar{R}_C)^2 + (22 - \bar{R}_C)^2)$

(iii)  $\text{Cov}_{A,C} = \frac{1}{2}((-23 - \bar{R}_A)(-47 - \bar{R}_C) + (-6 - \bar{R}_A)(43 - \bar{R}_C) + (46 - \bar{R}_A)(22 - \bar{R}_C))$

(iv)  $\text{SD}_p = \sqrt{(0.75)^2 \text{Var}_A + (0.25)^2 \text{Var}_C + 2(0.75)(0.25) \text{Cov}_{A,C}}$