

Spring 2012 Final
2:30 A

$$P2 \quad \begin{matrix} +2 & (14) \\ \times 3 & \\ \end{matrix} \left(R_{CE} = \frac{1}{3}(-47 + 43 + 22) \right), \quad \begin{matrix} +2 & (14) \\ \times 3 & \\ \end{matrix} \left(R_{STP} = \frac{1}{3}(3 + 15 + 38) \right)$$

$$\times 6 \quad \begin{matrix} +2 \\ \times 3 & \\ \end{matrix} \left(\text{COV}(R_{CE}, R_{STP}) = \frac{1}{2} \left((-47 - \bar{R}_{CE})(3 - \bar{R}_{STP}) + (43 - \bar{R}_{CE})(15 - \bar{R}_{STP}) \right. \right. \\ \left. \left. + (22 - \bar{R}_{CE})(38 - \bar{R}_{STP}) \right) \right) \quad (26)$$

$$\times 6 \quad \begin{matrix} +2 \\ \times 3 & \\ \end{matrix} \left(\text{VAR}_{STP} = \frac{1}{2} \left((3 - \bar{R}_{STP})^2 + (15 - \bar{R}_{STP})^2 + (38 - \bar{R}_{STP})^2 \right) \right) \quad \begin{matrix} (14) \\ (14) \\ \end{matrix}$$

$$\times 7 \quad \left(\beta_{CE} = \frac{\text{COV}_{CE,STP}}{\text{VAR}_{STP}} \right)$$