Chapter 13:

Questions: $1, 2, 5, 9, 11, 18$.

Chapter 14:

Questions: $9, 13$.

In addition:

9) In class we talked about the relationship between covariance matrices and portfolio theory. In particular the property of matrices called positive definiteness. If we are considering portfolios of only two assets with correlation ρ, the relevant correlation matrix is:

$$\begin{pmatrix} 1 & \rho \\ \rho & 1 \end{pmatrix}$$

Is this matrix positive definite? How would you go about proving it?

(Assume that $\rho \in (-1, 1)$)

10)