## Chapter 11

1. What are the portfolio weights for a portfolio that has 185 shares of stock $A$ that sells for $\$ 64$ per share, 115 shares of stock $B$ that sells for $\$ 49.00$ per share?
2. You own a portfolio that is $25 \%$ invested in stock $X, 35 \%$ in stock $Y$, and $40 \%$ in stock $Z$. The expected return on these three stocks are $10 \%, 13 \%$, an $15 \%$, respectively. What is expected return on the portfolio?
3. You own a stock portfolio, invested $15 \%$ in stock Q. $25 \%$ in stock R, $40 \%$ in stock $S$, and $20 \%$ in stock $T$. Betas for these four stocks are $.78, .87,1.13$, and 1.45 , respectively. What is the portfolio beta?
4. A stock has a beta of 1.14 , the expected return on the market is $10.9 \%$, and the risk free rate is $3.6 \%$. What must the expected return of this stock be?
5. Asset $W$ has expected return of $11.6 \%$ and a beta of 1.23 . If the risk free rate is $3.15 \%$, complete the following table for portfolios of asset W , and a risk free asset. Illustrate the relationship between portfolio, expected return and portfolio beta by plotting the expected returns against the betas in a graph. What is the slope of the line that results?

| Percentage of portfolio in asset <br> W. | Portfolio expected return. | Portfolio beta. |
| :--- | :--- | :--- |
| $0 \%$ |  |  |
| $25 \%$. |  |  |
| $50 \%$. |  |  |
| $75 \%$. |  |  |
| $100 \%$. |  |  |
| $125 \%$. |  |  |
| $150 \%$. |  |  |

6. Stock $Y$ has a beta of 1.2. An expected return of $11.4 \%$. Stock $Z$ has a beta of 8 and an expected return of $8 \%$. If the risk free rate is $2.5 \%$ and the market risk premium is $7 \%$, are these stocks priced correctly? If not, what should the correct prices be?
