A portfolio has 75 shares of Stock A that sell for $72 per share and 105 shares of Stock B that sell for $42 per share. The weight of A is   and the weight of B is  .

ou own a portfolio that has $1,700 invested in Stock A and $1,400 invested in Stock B. If the expected returns on these stocks are 8 percent and 10 percent, respectively, the expected return on the portfolio is  percent.

You own a portfolio that is 54 percent invested in Stock X, 32 percent in Stock Y, and 14 percent in Stock Z. The expected returns on these three stocks are 14 percent, 17 percent, and 11 percent, respectively. The expected return on the portfolio is   percent

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| Based on the following information, calculate the expected return. **(Input answer as a percent rounded to 2 decimal places, without the percent sign.)** |

|  |  |  |
| --- | --- | --- |
| State of Economy | Probability of State of Economy | Rate of Return if State Occurs |
| Recession |   | 0.45 |   |   | -0.08 |   |
| Boom |   | 0.55 |   |   | 0.24 |   |

|  |
| --- |
| The expected return is   percent. |

You own a stock portfolio invested 10 percent in Stock Q, 10 percent in Stock R, 5 percent in Stock S, and 75 percent in Stock T. The betas for these four stocks are 1.52, 1.72, 0.62, and 1.64, respectively. The portfolio beta is 

You own a portfolio equally invested in a risk-free asset and two stocks. If one of the stocks has a beta of 1.1 and the total portfolio is equally as risky as the market, the beta for the other stock in your portfolio is .

A stock has a beta of 0.95, the expected return on the market is 13 percent, and the risk-free rate is 7.15 percent. The expected return on this stock must be    percent.

A stock has an expected return of 19 percent, the risk-free rate is 7.6 percent, and the market risk premium is 13 percent. The beta of this stock must be   .

A stock has an expected return of 10 percent, its beta is 1.85, and the risk-free rate is 4.5 percent. The expected return on the market must be   percent

A stock has an expected return of 9 percent and a beta of 0.85, and the expected return on the market is 10 percent. The risk-free rate must be   percent.

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| You own a portfolio equally invested in a risk-free asset and two stocks. |

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| **Required:** |
| If one of the stocks has a beta of 1 and the total portfolio is equally as risky as the market, what must the beta be for the other stock in your portfolio? |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 2.40 |
|  |  |  | 2.00 |
|  |  |  | 1.60 |
|  |  |  | 2.20 |
|  |  |  | 1.00 |

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|  |
| **Using CAPM** |
| A stock has an expected return of 13 percent, a beta of 1.25, and the expected return on the market is 11 percent. |

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| **Required:** |
| What must the risk-free rate be? |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 2.40% |
|  |  |  | 3.00% |
|  |  |  | 94.55% |
|  |  |  | 3.30% |
|  |  |  | 3.60% |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| --- |
| Consider the following information: |
|  |

|  |  |  |
| --- | --- | --- |
|   |   | Rate of Return If State Occurs |
| State of Economy | Probability of State of Economy | Stock A | Stock B | Stock C |
| Boom |   | 0.74 |   |   | 0.31 |   |   | 0.05 |   |   | 0.19 |   |
| Bust |   | 0.26 |   |   | 0.07 |   |   | 0.17 |   |   | 0.11 |   |

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| --- |
| **Required:** |
| **(a)** | What is the expected return on an equally weighted portfolio of these three stocks? |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 17.43% |
|  |  |  | 15.00% |
|  |  |  | 19.92% |
|  |  |  | 18.26% |
|  |  |  | 16.60% |

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| --- | --- |
| **(b)** | What is the variance of a portfolio invested 20 percent each in A and B and 60 percent in C? |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 0.00100 |
|  |  |  | 0.00850 |
|  |  |  | 0.00550 |
|  |  |  | 0.00600 |
|  |  |  | 0.00350 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| **Returns and Standard Deviations** |
| Consider the following information: |
|  |

|  |  |  |
| --- | --- | --- |
|   |   | Rate of Return If State Occurs |
| State of Economy | Probability of State of Economy | Stock A | Stock B | Stock C |
| Boom |   | 0.15 |   |   | 0.25 |   |   | 0.45 |   |   | 0.35 |   |
| Good |   | 0.25 |   |   | 0.14 |   |   | 0.23 |   |   | 0.12 |   |
| Poor |   | 0.25 |   |   | 0.09 |   |   | 0.18 |   |   | 0.07 |   |
| Bust |   | 0.35 |   |   | 0.01 |   |   | 0.08 |   |   | 0.04 |   |

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| **Requirement 1:** |
| Your portfolio is invested 12 percent each in A and C and 76 percent in B. What is the expected return of the portfolio? |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 17.60% |
|  |  |  | 19.36% |
|  |  |  | 21.07% |
|  |  |  | 14.08% |
|  |  |  | 21.12% |

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| **Requirement 2:** |
| **(a)** | What is the variance of this portfolio? |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 0.02050 |
|  |  |  | 0.01300 |
|  |  |  | 0.01550 |
|  |  |  | 0.01800 |
|  |  |  | 0.00433 |

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| --- | --- |
| **(b)** | The standard deviation of this portfolio? |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 14.32% |
|  |  |  | 12.45% |
|  |  |  | 6.58% |
|  |  |  | 13.42% |
|  |  |  | 11.40% |

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| --- |
| Based on the following information: |

|  |  |  |
| --- | --- | --- |
| State of Economy | Probability of State of Economy | Rate of Return If State Occurs |
| Recession |   | 0.10 |   |   | -0.07 |   |
| Normal |   | 0.35 |   |   | 0.19 |   |
| Boom |   | 0.55 |   |   | 0.21 |   |

|  |
| --- |
| **Required:** |
| What is the expected return? |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  | 16.63% |
|  |  |  | 17.50% |
|  |  |  | 19.25% |
|  |  |  | 11.00% |
|  |  |  | 18.38% |

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