1. What is a main assumption of market model?

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2. What is the intuitive meaning of $\mathbb{V}\big(r_{it}\big|r_{mt}\big) = \sigma_i^2 - \dfrac{\sigma_{im}^2}{\sigma_m^2}$?

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3. What is the standard error of regression?

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4. What is the meaning of the security market line's slope?

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5. Is the estimation of market risk premium a model?

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6. If Jensen's measure indicates inferior performance, so does Treynor's measure. True or False?

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7. Information ratio is obtained by replacing the risk-risk rate with a benchmark of risky performance's return. True or False?

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8. Let $\boldsymbol{X}'\boldsymbol{X} = \begin{pmatrix} -1 & 2 \\ 3 & -4 \end{pmatrix}$ and $\boldsymbol{X}'\boldsymbol{y} = \begin{pmatrix} -3 \\ 7 \end{pmatrix}$ What is the slope of the simple linear regression?

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9. Continuing from Question 8, if the residual sum of squares is $\dfrac{1}{2}$ and the number of (paired) observations is 18. What is the standard error of the y-intercept estimate?

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10. What is the dimension of matrix $\boldsymbol{X}$ in Questions 8 and 9?

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11. What are your takeaways (new things learned and new insights and doubts) ?