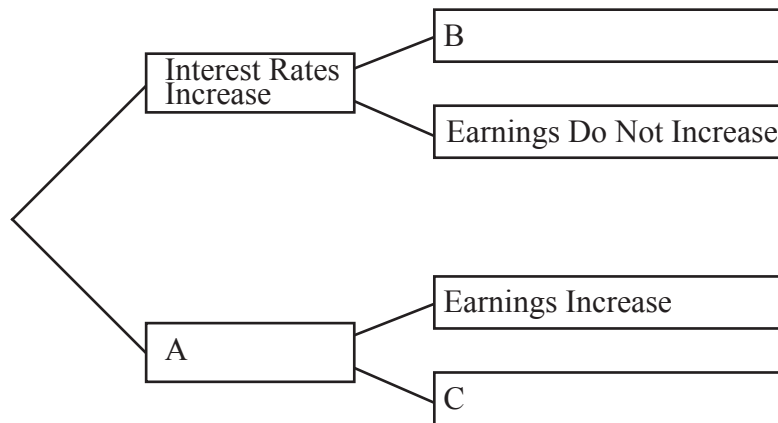


25. Alice Morton, CFA, is reviewing a research paper that reaches a conclusion based on two hypothesis tests with p -values of 0.037 and 0.064. Morton should conclude that:
- A. both of these tests' null hypotheses can be rejected with 90% confidence.
 - B. neither of these tests' null hypotheses can be rejected with 95% confidence.
 - C. only one of these tests' null hypotheses can be rejected with 99% confidence.
26. Lee Pickett, CFA, is forecasting next year's earnings for Stonewall Company using a probability model. Pickett believes the probability that Stonewall's earnings will increase in the next year depends on whether interest rates increase. Pickett constructs the following tree diagram:



- In this tree diagram:
- A. Cell A represents the unconditional probability that interest rates do not increase.
 - B. Cell B represents the conditional probability that interest rates increase, given that earnings increase.
 - C. Cell C represents the conditional probability that earnings do not increase, given that interest rates increase.
27. If a one-tailed z -test uses a 5% significance level, the test will reject a:
- A. true null hypothesis 5% of the time.
 - B. false null hypothesis 95% of the time.
 - C. true null hypothesis 95% of the time.

28. Burle Weaver and Jane Palmer, analysts for Growthmore Managers, are assigned the task of examining the mean return for growth stocks. After sorting 10,000 stocks based on price-to-earnings ratios, Weaver and Palmer classify the stocks with price-to-earnings ratios above the median as growth stocks. They then use a random number generator to select a sample of 100 stocks from the growth stocks. In his meeting with the Growthmore board, Weaver states that his sampling procedure is an example of stratified random sampling. Palmer explains that the distribution of the 100 sampled stocks is called a sampling distribution. Determine whether the statements made by Weaver and Palmer are correct.
- A. Only Weaver is incorrect.
 - B. Only Palmer is incorrect.
 - C. Both Weaver and Palmer are incorrect.
29. On a point-and-figure chart, each unit on the horizontal axis represents a(n):
- A. equal time period.
 - B. specific number of shares traded.
 - C. change in direction of the price trend.
30. Jon Pelker plans to retire in six years and will require \$950,000. Today, Pelker will deposit \$100,000 into an interest bearing account and will deposit an additional \$100,000 at the end of each of the next six years. What annual percentage return must Pelker earn to achieve his goal of \$950,000 for his retirement?
- A. 8%.
 - B. 10%.
 - C. 18%.
31. Gus Hayden is evaluating the performance of the portfolio manager in charge of his retirement account. The account started with \$5,000,000 and generated a 15% return in year 1 and a -5% return in year 2. Hayden adds \$2,000,000 at the beginning of year 2. The appropriately measured annualized return is *closest* to:
- A. 3.0%.
 - B. 4.5%.
 - C. 9.0%.
32. Kidra Rao ranks and classifies firms into ten groups based on their interest coverage ratios, lowest to highest. Rao's ranking system is *best* described as a(n):
- A. ratio scale.
 - B. nominal scale.
 - C. ordinal scale.

18. C According to the guidance for Standard III(C) Suitability, an advisor who receives an unsolicited trade request that is unsuitable should discuss the trade with the client before carrying it out. If the unsolicited trade would not have a material effect on the client's portfolio, the advisor should discuss with the client how this trade deviates from the client's IPS, then follow her firm's policies for obtaining client approval. At a minimum, this should require the client to acknowledge having discussed the trade's unsuitability with the advisor.
19. C An empirical probability is established by analyzing past data. Note that the question is only asking about investors under the age of 30. In the survey, the number of investors under 30 was $325 + 235 = 560$. The number of investors under 30 who did not make a stock trade was $325 / 560 = 0.58$ or 58%. (Study Session 2, LOS 9.b)
20. A Phillips is interested in the probability of observing a result that is one standard deviation above the expected value for EPS. Approximately 68% of observations fall within plus or minus one standard deviation of the mean. Therefore, $1 - 0.68 = 0.32$ or 32% remains in the tails. Since we are interested in the upper tail, we can say that there is $0.32 / 2 = 0.16$ or 16% probability of observing an EPS greater than 3. (Study Session 3, LOS 10.m)
21. C The arithmetic mean is statistically the best estimate (expected value) of the next year's return. The harmonic mean is not typically used to compute the historical performance or forecast the expected performance of an investment; rather it is used to compute the average cost of shares purchased over time. The geometric mean is used to calculate average annual compound returns. It is the best estimate of future multi-year annual compound returns, but the arithmetic mean is the best estimate of a single year's return. (Study Session 2, LOS 8.e, m)
22. B The histogram contains a long left tail, which indicates significant negative skew for the distribution. If the histogram contained a long right tail, the distribution would have exhibited positive skew. A distribution with negative excess kurtosis (i.e., a platykurtic distribution) is less peaked and has thinner tails compared to a normal distribution. A distribution that is more peaked and has thicker tails compared to a normal distribution has positive excess kurtosis (i.e., a leptokurtic distribution). (Study Session 2, LOS 8.d, j)
23. A An opportunity cost is the amount foregone by pursuing a specific course of action. By holding onto cash, the individual is foregoing interest that could be earned by investing the cash. As interest rates rise, the opportunity cost of holding onto the cash also rises. Therefore, McGrow is correct. Interest rates are used to discount future cash flows in order to determine today's (present value) equivalent of the future cash flow amounts. The present value is inversely related to the discount rate. Therefore, Modello is also correct. (Study Session 2, LOS 6.a)
24. B Technical analysts believe the flow of information into the market is gradual, causing the market to adjust prices to a new equilibrium over a significant period of time. (Study Session 3, LOS 13.a)
25. C Because order is important, use the permutation formula to select 4 managers for a bonus out of the 7 managers eligible: $7! / (7 - 4)! = 7! / 3! = 5,040 / 6 = 840$. (Study Session 2, LOS 9.o)

26. **B** This is a difference of means test where we want to know if the mean result of the new drug is greater than the mean result of the current treatment. The decision rule for the null hypothesis is $H_0: \mu_{\text{New}} - \mu_{\text{Current}} \leq 0$. Results from the new drug and the current treatment are likely to be independent, so a paired comparisons test is not appropriate. (Study Session 3, LOS 12.i)
27. **B** The 95% confidence interval is the range of possible stock returns that has 95% probability of including the hypothesized population mean. The decision rule is to not reject the null hypothesis if the hypothesized mean lies within the 95% confidence interval, and to reject the null hypothesis if the hypothesized mean lies outside the 95% confidence interval. The decision rule is to reject the null hypothesis whenever the (absolute value of the) calculated test statistic exceeds its critical value (i.e., the test statistic lies in the “rejection tail”). The power of a test is the probability of rejecting the null hypothesis when it is false. (Study Session 3, LOS 12.d)
28. **C** Gallant receives a €500 dividend on the MM preferred shares plus a €6,000 payment from Wood at the end of year 1. The preferred shares offer a perpetuity of €500, which Gallant sells at the end of year 1. At the end of year 1, the value (price received by Gallant) for the preferred stock equals $€500/0.10 = €5,000$.
- $$\text{Holding period return} = \frac{5,000 + 6,000 + 500 - 10,000}{10,000} = 15\%.$$
- (Study Session 2, LOS 7.c)
29. **B** Each Student’s t-distribution is defined by a single parameter, its degrees of freedom. (Study Session 3, LOS 11.i)
30. **B** An ordinal scale puts data into categories that can be ordered with respect to some characteristic. A nominal scale places data into categories that have no particular order. In a ratio scale, data is ordered, differences in data values are meaningful, and ratios of values are meaningful. In this case, the securities are ranked in order with respect to buy/sell ratings, but the differences between ratings (e.g., the differences between 5 and 4 and between 4 and 3) are not necessarily uniform, and ratios of the ratings are not meaningful. (Study Session 2, LOS 8.a)
31. **B** According to the Central Limit Theorem, if the sample size is large, the sample mean will be distributed normally regardless of the population’s distribution, specific inferences can be about the population mean, and the sample mean will have a standard deviation equal to the population standard deviation divided by the square root of the sample size (also known as the standard error). (Study Session 3, LOS 11.e)
32. **A** The major limitations of Monte Carlo simulation are that it is fairly complex and will provide answers that are no better than the assumptions used and that it cannot provide the insights that analytic methods can. Monte Carlo simulation is useful for performing “what if” scenarios. One of the first steps in Monte Carlo simulation is to specify the probably distribution along with the distribution parameters. The distribution specified does not have to be normal. (Study Session 3, LOS 10.q)
33. **C** For a price searcher firm, price discrimination can increase profits if the firm has two or more identifiable customer groups with different price elasticities of demand, and if customers who buy the product at a lower price cannot resell it to other customers. (Study Session 4, LOS 15.d)