



Decision Management Technology.d

- 1 Descriptive analytics:
- 2 A manager at Gampco Inc. wishes to know the company's revenue and profit in its previous quarter. Which of the following business analytics will help the manager?
- 3 Predictive analytics:
- 4 A trader who wants to predict short-term movements in stock prices is likely to use ... Analytics.
- 5 Which of the following questions will prescriptive analytics help a company address?
- 6 The demand for coffee beans over a period of three months has been represented in the form of an L-shaped curve. Which form of model was used here?
- 7 Decision variables:
- 8 Identify the uncontrollable variable from the following inputs of a decision model.
- 9 Which of the following inputs of a decision model is an example of data?
- 10 Descriptive decision models:
- 11 Prescriptive decision models help:
- 12 The manager at Soul Walk Inc., a shoe manufacturing company, wants to set a new price (P) for a shoe model to maximize total profit. The demand (D) as a function of price is represented as: $D = 1,500 - 2.5P$. The total cost (C) as a function of demand is represented as: $C = 3,200 + 3.5D$ Which of the following is a model for total profit as a function of price?
- 13 What is a database?
- 14 In a database, information is stored and maintained in .
- 15 The sort buttons in Excel can be found under:





- 16 ... is a logical function that returns one value if the condition is true and another if the condition is false.
- 17 Which of the following functions is a logical function that returns TRUE if any condition is true and FALSE if not?
- 18 Give the logical function for the following: If cell B7 equals 12, check contents of cell B10. If cell B10 is 10, then the value of the function in the string is YES; if not, it is a blank space. If cell B7 does not equal 12, then the value of the function is 7.
- 19 If cell G7 contains the function ..., it states that if the value in cell C3 is 9, the number 7 will be assigned to cell G7; if the value in cell C3 is not 9, the number 4 will be assigned to cell G7.
- 20 The function ... returns a value or reference of the cell at the intersection of a particular row and column in a given range.
- 21 Which of the following Lookup functions returns the relative position of an item in an array that equals a specified value in a specified order?
- 22 In a MATCH function, if the match_type = 0, then
- 23 For which of the following MATCH functions must the values in the lookup_array be ordered in a descending order?
- 24 To select a chart type in Excel from the Charts group, which tab has to be accessed?
- 25 Roger wants to compare values across categories using vertical rectangles. Which of the following charts must Roger use?
- 26 Which of the following charts provides a useful means for displaying data over time?
- 27 Philip wishes to understand the relative proportion of each data source to the total. Which of the following charts must Philip use?
- 28 Observations consisting of pairs of variable data are required to construct a ... chart.
- 29 Which of the following charts shows three-dimensional data?
- 30 Peige, a stock broker, has data consisting of price, price/earnings ratio, and market capitalization for seven different stocks on one particular day. She wishes to plot these three variables in two dimensions. Which of the following charts must Peige use?
- 31 Which of the following charts allows plotting of multiple dimensions of several data series?





- 32) After choosing the PivotTable, the PivotChart can be found on the ... tab.
- 33) How many types of Spark lines are available?
- 34) Which of the following is an example of a measure of continuous metrics?
- 35) Nominal data:
- 36) Which of the following is a disadvantage of ordinal data?
- 37) Which of the following allow meaningful comparison of ranges, averages and other statistics?
- 38) Following are the components of a data set containing purchase details of a shoe manufacturing company. Identify the ratio data.
- 39) When data are classified by the type of measurement scale, which is the strongest form of measurement?
- 40) To construct a frequency distribution for categorical data, the
- 41) If a data set has 'c' number of observations, the relative frequency of category 'l' is computed as
- 42) Which of the following is true of an unbiased estimator value?
- 43) Which of the following probabilities gives the confidence coefficient?
- 44) Identify the power of the test from the following probabilities.
- 45) In a linear relationship, which of the following accounts for the many possible values of the dependent variable that vary around the mean?
- 46) Which of the following is true about the classical definition of probability?
- 47) John and Mike were offered mints. What is the probability that at least John or Mike would respond favorably? (Hint: Use the classical definition).
- 48) Consider an event X comprised of three outcomes whose probabilities are $\frac{9}{18}$, $\frac{1}{18}$, and $\frac{6}{18}$. Compute the probability of the complement of the event.





- 49) What is the probability that either event X or Y occurs? Use the data given below to answer the following question(s). In an event X, the probability of rolling a sum of 8 on two dice is $\frac{5}{36}$ while the probability of rolling an 11 is $\frac{2}{36}$. In another event Y, the probability of rolling a 2 is $\frac{1}{36}$, the probability of rolling a 9 is $\frac{4}{36}$, and the probability of rolling a 4 is $\frac{3}{36}$.
- 50) What is probability that neither X nor Y will occur?
- 51) Consider an event Z that includes all outcomes of rolling two dice whose sum is odd. What is the probability that either event Y or Z occurs?
- 52) Which of the following computes the probability of an event P given that event Q is known to have occurred?
- 53) What is the probability that a respondent is male and prefers Arts? Use the data given below to answer the following question(s). 15 students were asked to choose between the broad categories of Arts, Science, and Math as their preferred area of study. Respondent Gender Preference
1 Female Arts 2 Male Science 3 Male Math 4 Female Arts 5 Female Math 6 Male Science 7 Male Math 8 Male Math 9 Female Arts 10 Male Arts 11 Male Science 12 Female Science 13 Female Math 14 Male Arts 15 Female Arts
- 54) What is the probability that a respondent prefers Science given that the respondent is female?
- 55) Use the multiplication law of probability to compute the probability that the respondent is male and prefers Math.
- 56) Which of the following will hold true if events X and Y are independent?
- 57) A ... is a description of the approach that is used to obtain samples from a population prior to any data collection activity.
- 58) Which of the following is true of judgment sampling?
- 59) Which of the following types of sampling involves using random procedures to select a sample?
- 60) ... Involves selecting items from a population so that every subset of a given size has an equal chance of being selected.
- 61) Which of the following sampling methods bases its selection of samples on the ease of data collection?
- 62) Which of the following describes periodic sampling?





- 63) ... sampling applies to populations that are divided into natural subsets and allocates the appropriate proportion of samples to each subset.
- 64) ... is based on dividing a population into subgroups, sampling a set of subgroups, and conducting a complete census within the subgroups sampled.
- 65) In sampling, ... involves assessing the value of an unknown population parameter– such as a population mean, population proportion, or population variance–using sample data.
- 66) From the standard deviation formula $\sum(s-\bar{s})^2 / n-1$, identify the estimator formula
- 67) A(n) ...is a single number derived from sample data that is used to estimate the value of a population parameter.
- 68) For which of the following is the value of the estimator said to be biased?
- 69) Which of the following propositions describes an existing theory or belief?
- 70) Which of the following is the initial step in conducting a hypothesis test?
- 71) Which of the following is a valid one-sample hypothesis test?
- 72) A manufacturer wishes to determine if the average profit from the sale of his product exceeds \$6,710. Which of the following is the appropriate hypothesis test?
- 73) Which of the following is true about determining the proper form of the hypotheses?
- 74) Which of the following is a Type I error?
- 75) Robin Inc. feared that the average company loss is running beyond \$34,000. It initially conducted a hypothesis test on a sample extracted from its database. The hypothesis was formulated as H_0 : average company loss $\leq$ \$34,000 vs. H_1 : average company loss $>$ \$34,000. The test resulted in favor of Robin Inc.'s loss not exceeding \$34,000. Detailed study of company accounts later revealed that the average company loss had run up to \$37,896. Which of the following errors were made during the hypothesis test?
- 76) Type II error occurs when the test:
- 77) Level of significance is the probability of:





- 78 The confidence coefficient is denoted by:
- 79 What is the confidence coefficient when the level of significance is 0.03?
- 80 Which of the following denotes the power of the test?
- 81 A regression model that involves a single independent variable is called .
- 82 Regression models of ... data focus on predicting the future.
- 83 What is the relationship between the age of the furniture and their values? The following table exhibits the age of antique furniture and the corresponding prices. Use the table to answer the following question(s). (Hint: Use scatter diagram and the Excel Trendline tool where necessary).
Number of years Value (\$) 78 930 91 1010 83 970 159 1950 134 1610 210 2880 88 980 178 2010 124 1370 72 900
- 84 Which of the following is true of linear functions used in predictive analytical models?
- 85 ... are mathematical functions used in predictive analytical models which define phenomena that increase at a specific rate, and is represented by the formula $y = axb$
- 86 Which of the following mathematical functions, used in predictive analytical models, is represented by the formula $y = ax^3 + bx^2 + cx + d$?
- 87 In ... functions, represented by $y = abx$, y rises or falls at constantly increasing rates.
- 88 In Excel's Trendline tool, the value of the ... gives the measure of fit of the line to the data.
- 89 Which of the following is true of the R-squared (R^2) value in Excel's Trendline function?
- 90 Which of the following equations correctly expresses the relationship between the two variables?
- 91 What is the expected value for a 90 year-old piece of furniture?

