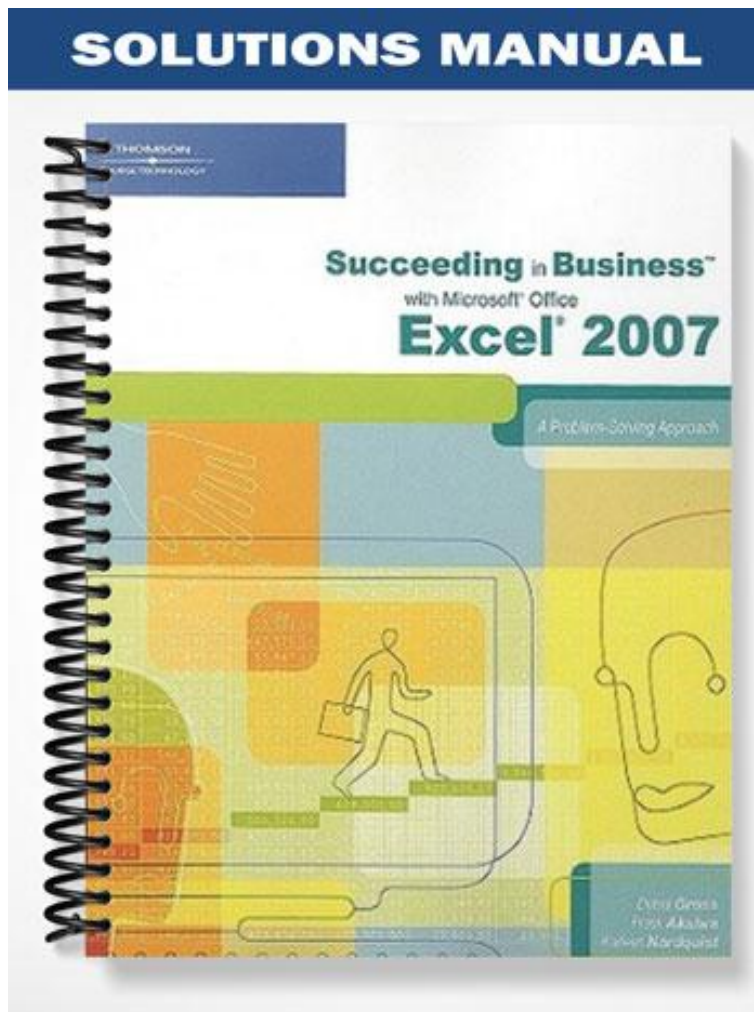


SOLUTIONS MANUAL



Answers to Concepts Questions: Chapter 2

1. What formula could you write to calculate the mean of the following data set: 2, 5, 4, 3, 1, 2, 7? (Note that a resulting value is not required.)
=AVERAGE(2,5,4,3,1,2,7)
2. What is the median value of the data set given in Question 1?
3
3. What is the median value of the data set given in Question 1?
2
4. The data set given in Question 1 has a standard deviation of 1.58 as compared with another data set that has the same mean but a standard deviation of 2.5. What general differences would you expect to find between the two sets of data?
2nd data set has a larger standard deviation indicating values are more widely distributed – thus more high/low values away from the mean.
5. In the chapter, the original labor rate for inspectors was given as \$35 per hour. However, due to a contract renegotiation, this value is now \$37.50. What algebraic expression could you use to determine the percent increase in labor costs? (Note that a resulting value is not required.)
=(37.50-35)/35
6. When using the Increase Decimal button on the toolbar, the precise value in the cell is modified. True or False?
False
7. The formula =ROUND(345.43,0) results in what precise value?
345
8. Write a formula to round up 63.54% to the nearest percent.
=ROUND(63.54,2)
9. What is the symbol for the greater than or equal to relational operator in Excel?
>=
10. What is the symbol for the not equal to relational operator in Excel?
<>
11. Review the following worksheet, and then use the COUNTIF function to write a formula that determines the number of GM cars on this list.
=COUNTIF(A2:A10, "GM")
12. Using the worksheet shown in Question 11, write a formula to determine the number of cars that cost less than \$20,000.
=COUNTIF(B2:B10, "<20000")

13. Using the worksheet shown in Question 11, write a formula to determine the total value of all Ford cars.

=SUMIF(A2:A10, "FORD", B2:B10)

14. Explain the difference between a “what-if” analysis and Goal Seek by giving an example based on the worksheet shown in Question 11.

A what if analysis would be changing one or more of the input values on the sheet – such as the price of the first Ford car – once this is changed the resulting total should automatically update. A goal seek analysis would allow you to determine what the needed input value to get a specified output. For example what would the price of the first Ford have to be to get a total cost of all makes of \$200,000.

15. Using the worksheet shown in Question 11, write a formula to determine the value of the third most expensive car.

=LARGE(B2:B10,3)

16. If each car shown in Question 11 is marked up between \$50 and \$250 in dollar increments, what function could be used to randomly assign the amount to be added to this car price in this formula: =B2+ _____?

=B2+RANDBETWEEN(50,250)

17. The formula =RAND() gives what result?

A random value between 0 and 1

18. What formula could you write to average the values in cells A10 through A20 excluding blank cells, rounded to the nearest 10?

=ROUND(AVERAGE(A10:A20),-1)

19. Write a formula to determine the average price of only Ford vehicles using the worksheet in Question 11.

=SUMIF(A2:A10, "FORD", B2:B10)/COUNTIF(A2:A10, "FORD")

20. Write a formula to generate a random integer value between 10 and 20.

RANDBETWEEN(10,20)