MSBA 250 — Applied Business Analytics

University of the Pacific
Spring 2024
Assignment 3 Solutions

Instructions:

This problem set has 5 questions. The full credit is 20.

Problem 1 (3 points):

Total = 83 + 20 + 62 + 59 = 224

P (finance or marketing) = P (finance) + P (marketing) = 83/224 + 20/224 = 45.98%

Problem 2 (6 points):

The weekly demand of a slow-moving product has the following probability mass function:

Demand, *x*	Probability, *f(x)*
0	0.2
1	0.4
2	0.3
3	0.1
4 or more	0

(a) Find the expected value of weekly demand (2 points)

$EV = 0 \times 0.2 + 1 \times 0.4 + 2 \times 0.3 + 3 \times 0.1 = 1.3$

(b) Find the variance of weekly demand (2 points)

Var = 1.3^2*0.2+0.3^2*0.4+0.7^2*0.3+1.7^2*0.1=0.81

(c) Find the standard deviation of weekly demand (2 points)

Std. = sqrt (0.81) = 0.9

Problem 3 (5 points):

$$P(x > 600) = 1 - P(x \leq 600) = 1 - Z\left(\frac{600 - 610}{30}\right)$$
$$= 1 - Z(-0.33)$$
$$= 1 - 0.3694$$
$$= 0.6306$$

=NORM.S.DIST(-0.33,1)

Problem 4 (2 points):

USE CORR Functions in Tableau. Answer is 0.9975.

Problem 5 (4 points):

The insights should be well-written, structural, logical, and comprehensive.