

FOIT- Probability and Statistics (Revision Practice Task Sheet 03)**Ch# 12**

Question 1: In Europe and Asia, m-commerce is popular. M-commerce users have special mobile phones that work like electronic wallets as well as provide phone and Internet services. For the years 2000 through 2004, was there a relationship between the year and the number of m-commerce users? Construct a scatter plot. Let x = the year and let y = the number of m-commerce users, in millions. Construct regression line.

x(year)	y(Users)
2000	0.5
2002	20
2003	33
2004	47

Question 2: SCUBA divers have maximum dive times they cannot exceed when going to different depths. The data show different depths with the maximum dive times in minutes. Use your calculator to find

- The least squares regression line
- Predict the maximum dive time for 110 feet
- Calculate Correlation coefficient

x(depth in feet)	y(Max. dive time)
50	80
60	55
70	45
80	35
90	25
100	22

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Question 3: Determine the estimated regression equation $y = a + bx$ in each of the following cases:

$$n = 10, \sum x = 20, \sum y = 260, \sum xy = 3490, \sum x^2 = 3144$$

Question 4: The following table shows ages and systolic blood pressure of women:

Age(x)	Blood pressure(y)
56	147
42	125
72	160
36	118
63	149
47	128
55	150
49	145

- Decide which variable should be the independent variable and dependent variable.
- Draw a scatter plot of the ordered pairs.
- Calculate the least-squares line. Put the equation in the form of: $\hat{y} = a + bx$
- Estimate the expected blood pressure of a women whose age is 45 year

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