

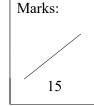
## SECI 1143: PROBABILITY & STATISTICAL DATA ANALYSIS 2024/2025 – SEMESTER 2

## **QUIZ 1**

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Date : 11/5/2025



QUESTION 1 [3 MARKS]

A school counselor is analyzing the weekly pocket money received by 15 randomly selected students to understand their spending capacity. The data (in RM) collected from the students are as follows:

| 15 | 20 | 25 | 30 | 35 | 40 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |

- a) What is the **mean** of the pocket money received by the students? (1 marks)
- b) What is the **median** of the pocket money received by the students? (2 marks)

QUESTION 2 [7 MARKS]

A supermarket manager recorded the number of items purchased by 50 customers during a weekend promotion. The data is grouped as follows (Table 1):

Table 1: Items Purchased by 50 Customers During the Weekend Promotion

Number of Item Purchased	Frequency
1 – 5	6
6 – 10	10
11 – 15	18
16 – 20	9
21 – 25	7
26 – 30	10

a) Fill in the missing information below () based on the data given in **Table 1**. (3 marks)

Class Interval (in kg)	Midpoint (in kg)	Frequency	<b>Cumulative Frequency</b>
1 – 5		6	
6 – 10		10	
11 – 15		18	
16 – 20		9	
21 – 25		7	
26 – 30		10	
Total		50	

b) Calculate the median number of items purchased using the formula: (4 Marks)

$$median = L + (\frac{\binom{N}{2} - cf_p)}{f_{med}}) \times W$$

QUESTION 3 [5 MARKS]

A manager collected the weekly number of customer complaints received over 8 weeks, as shown below:

Number of complaints per week:

Given that the 75th percentile of this data set is 16, determine the missing data point (x).

in the second se	
3)	11,12,13,14,(5,17) 18,2
	x <16 1=(75×8)=100=6.
) rains of particular and particular	n - 8
	p= 9-5
	$\frac{P}{100} = 75 \times 8 = 6$
	value, + value, = >c
	2
	value, +value, =16.
	2
	volue + Value = 32 -> Y[6] = 17, Y[7] = 18 (17+18) = 35 not match
	Y[6] = 17, Y[5] = 15 (17+16) = 32 match
	17+ x=32.
	7=15
P	