

Pabna Cadet College
3rd Tutorial Examination
Subject: Mathematics
Class: VII

Time: 40 minutes

Full Marks: 20

Answer all the questions

1.

Given below are the daily income and expense of ten workers.

Income(x)	Expense (y)
120	80
130	120

From above data,

i. Find

$$\sum_{i=1}^2 x_i y_i \text{ and } \left(\sum_{i=1}^2 x_i \right) \left(\sum_{i=1}^2 y_i \right)$$

ii. Are they equal?

iii. Find

$$\sum_{i=1}^2 \sum_{j=1}^2 x_i y_j$$

Which of (i) is equal to it?

iv. Find

$$\sum_{i=1}^2 \sum_{j=1}^2 (x_i - y_j)$$

Solution:

Table for calculation

Income(x)	Expense (y)	xy
120	80	9600
130	120	15600

Solution using R code:

```
x <- c(120,130)
y <- c(80,120)
df <- expand.grid(x,y)
```

—Good Luck—