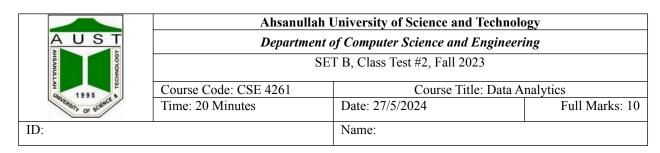


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| Department of Computer Science and Engineering  |                      |                |  |
| SET A, Class Test #2, Fall 2023                 |                      |                |  |
| Course Code: CSE 4261                           | Course Title: Data A | nalytics       |  |
| Time: 20 Minutes                                | Date: 27/5/2024      | Full Marks: 10 |  |
|   | Name:                |                |  |

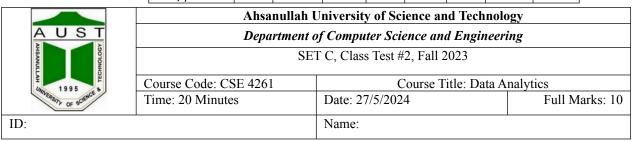
1. Interpret the Regression Line and R² from the following dataset: where the mass, y(grams), of a chemical is related to the time, x(seconds), for which the chemical reaction occurs.

| Time, x (seconds) | Mass, y (grams) |
|-------------------|-----------------|
| 55                | 4040            |
| 77                | 120120          |
| 1212              | 180180          |
| 1616              | 210210          |
| 2020              | 240240          |



1. Find the equation of the regression line and R<sup>2</sup> value. To see how students' reaction skills have improved over a year, eight students took a reaction test at the start and end of the year. These are their scores:

| Student       | Lia | Felicit | Adia | Mel | Lero | Vic | Lawri | Louis |
|---------------|-----|---------|------|-----|------|-----|-------|-------|
|               | m   | у       | n    |     | у    |     | e     | e     |
| First Test, x | 565 | 7575    | 6161 | 616 | 6767 | 727 | 6262  | 6161  |
|               | 6   |         |      | 1   |      | 2   |       |       |
| Second        | 212 | 3939    | 3434 | 212 | 3232 | 242 | 2929  | 24    |
| Test, y       | 1   |         |      | 1   |      | 4   |       |       |



1. Consider the following dataset with given transactions and find out the accepted rules. The minimum support is 30% and confidence is 50%.

| TransactionId | Items         |
|---------------|---------------|
| 1             | {A,C,D}       |
| 2             | {B,C,D}       |
| 3             | $\{A,B,C,D\}$ |
| 4             | {B,D}         |
| 5             | {A,B,C,D}     |

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|-------------------------|---|------------------------------|----------------|--|
| AUST                    | Department of Computer Science and Engineering  |                              |                |  |
| OTONI                   | SET D, Class Test #2, Fall 2023                 |                              |                |  |
| TECH                    | Course Code: CSE 4261                           | Course Title: Data Analytics |                |  |
| UNIVERSITY OF SCIENCE & | Time: 20 Minutes                                | Date: 27/5/2024              | Full Marks: 10 |  |
| ID:                     |   | Name:                        |                |  |

1. Interpret the Regression Line and R<sup>2</sup> from the following foods dataset: where the number of grams of carbohydrates, x, and the number of Calories, y.

| Carbohydrates (x) | Calories (y) |
|-------------------|--------------|
| 8                 | 120          |
| 9.5               | 138          |
| 10                | 147          |
| 6                 | 88           |
| 7                 | 108          |
| 4                 | 62           |

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| POLOGE                 | SET E, Class Test #2, Fall 2023                 |                      |                |  |
| A 1995                 | Course Code: CSE 4261                           | Course Title: Data A | nalytics       |  |
| OMNERSITY OF SCIENCE & | Time: 15 Minutes                                | Date: 27/5/2024      | Full Marks: 10 |  |
| ID:                    |   | Name:                |                |  |

1. Omar has a piece of rope. He ties a knot in the rope and measures the new length of the rope. He then repeats this process several times. Some of the data collected are listed in the table below. Where x is the Number of Knots Find, and Y is the Length of the Rope. Find the equation of the regression line and R<sup>2</sup> value.

| Number of Knots     | 4  | 5  | 6  | 7  | 8  |
|---------------------|----|----|----|----|----|
| Length of Rope (cm) | 64 | 58 | 49 | 39 | 31 |

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| HYTTINNSHI          | SET F, Class Test #2, Fall 2023                 |                      |                |  |
| 1995                | Course Code: CSE 4261                           | Course Title: Data A | nalytics       |  |
| THERSITY OF SCIENCE | Time: 20 Minutes                                | Date: 27/5/2024      | Full Marks: 10 |  |
| ID:                 |   | Name:                |                |  |

1. Consider the following dataset with given

transactions and find out the accepted rules. The minimum support is 33% and confidence is 50%.

| Transaction | Items Purchased                    |
|-------------|------------------------------------|
| 1           | Milk, Egg, Bread, Butter           |
| 2           | Milk, Butter, Egg, Ketchup, Butter |
| 3           | Bread, Butter, Ketchup             |
| 4           | Milk, Bread, Butter                |
| 5           | Bread, Butter, Cookies             |
| 6           | Milk, Bread, Butter, Cookies       |
| 7           | Milk, Cookies                      |
| 8           | Milk, Bread, Butter                |
| 9           | Bread, Butter, Egg, Cookies        |
| 10          | Milk, Butter, Bread                |
| 11          | Milk, Bread                        |
| 12          | Milk, Bread, Cookies, Ketchup      |