|  |  |  |  |
| --- | --- | --- | --- |
| **Product Group** | **Product ID** | **Sales** | **Profit** |
| A | 6797 | 1,000 | 200 |
| A | 6745 | 500 | 90 |
| B | 1278 | 200 | 60 |
| B | 1245 | 1,500 | 350 |
| C | 7890 | 650 | 80 |
| D | 4587 | 350 | 50 |

Q1). Filter out product IDs that contribute to top 80% of the total profit of their respective group.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Order Day** | **Order ID** | **Shipment ID** | **Product ID** | **Quantity** |
| 12-Oct-18 | 8618835 | 8609049 | 7856 | 1 |
| 12-Oct-18 | 8618835 | 5669592 | 2453 | 2 |
| 14-Oct-18 | 5679378 | 8618817 | 5426 | 4 |
| 15-Oct-18 | 6794679 | 8757579 | 7894 | 5 |
| 16-Oct-18 | 2470708 | 6597674 | 7643 | 2 |
| 17-Oct-18 | 9875757 | 7867848 | 9876 | 1 |
| 17-Oct-18 | 7869346 | 5659879 | 5682 | 1 |

|  |  |
| --- | --- |
| **Product ID** | **Container Flag** |
| 7856 | Y |
| 2453 | N |
| 5426 | N |
| 7894 | Y |
| 7643 | N |
| 9876 | N |
| 5682 | N |

Q2). List the count of total orders and products that were sold in a container and had one shipment and one product per order.

Q3). Select top 20 pair of products that are ordered together in a month

Q4). Filter out products that are ordered as singles (single product per order), 70% of the time in a month but are getting split during shipment when they ordered in multiple (multiple products per order).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Purchase ID** | **Product Group** | **Product ID** | **Sales** | **Units** | **Success Flag** |
| 178547 | A | 6797 | 1,500 | 2 | Y |
| 658689 | A | 6785 | 5,600 | 1 | Y |
| 836721 | B | 7897 | 9,850 | 1 | N |
| 287986 | B | 7865 | 5,400 | 5 | N |
| 726786 | C | 3457 | 340 | 2 | Y |
| 876387 | D | 8756 | 230 | 1 | N |

Q5). List down top 10 products within each product group having the maximum failure amount (Failure\_Count = Purchase\_Count - Successful\_Purchase\_Count)

Q6). List down the total failures within the following selling\_price (Sales/Units) of a product bucket.  
0-100  
100-200  
200-500  
500-1000  
1000+