```sql
1. Total sales per country
SELECT Country, SUM(Quantity * UnitPrice) AS TotalSales FROM [online_sales_dataset]
GROUP BY Country
ORDER BY TotalSales DESC;
```

133 %

**Results** | **Messages**

| | Country | TotalSales |
|---|---|---|
| 1 | United Kingdom | 5128232.81034303 |
| 2 | Belgium | 5124058.22157335 |
| 3 | Germany | 5111343.36001658 |
| 4 | United States | 5076174.16689837 |
| 5 | France | 5063516.5495925 |
| 6 | Sweden | 5028849.93913531 |
| 7 | Spain | 5014548.61777318 |
| 8 | Portugal | 4974618.95358932 |
| 9 | Netherlands | 4934815.53902054 |
| 10 | Norway | 4930232.34970832 |
| 11 | Italy | 4909348.59244263 |
| 12 | Australia | 4846793.98037243 |

Query executed successfully

```sql
2. Top 5 sold Products
SELECT Top 5 Description,SUM(Quantity) AS TotalQuantity FROM [online_sales_dataset]
GROUP BY Description
ORDER BY TotalQuantity DESC
```

133 %  ▾

⊞ Results  ▤ Messages

|   | Description | TotalQuantity |
|---|-------------|---------------|
| 1 | USB Cable   | 103574        |
| 2 | Backpack    | 103513        |
| 3 | Wall Clock  | 102745        |
| 4 | White Mug   | 102541        |
| 5 | Desk Lamp   | 102474        |

3. Average discount per discount method

```sql
SELECT PaymentMethod, AVG(Discount) AS AverageDiscount FROM [online_sales_dataset]
GROUP BY PaymentMethod;
```

133 % ▾ ◂

⊞ Results  📄 Messages

| | PaymentMethod | AverageDiscount |
|---|---|---|
| 1 | Bank Transfer | 0.273771126182397 |
| 2 | paypall | 0.278843817416149 |
| 3 | Credit Card | 0.274658690022696 |

```sql
4. Monthly Sales Trend
SELECT
  format(InvoiceDate,'yyyy-MM') AS Month,
  SUM(Quantity * UnitPrice) AS MonthlySales FROM [online_sales_dataset]
GROUP BY format(InvoiceDate,'yyyy-MM')
ORDER BY Month;
```

133 %  ▾

⊞ Results  📄 Messages

| | Month | MonthlySales |
|---|---|---|
| 1 | 2020-01 | 887759.379284382 |
| 2 | 2020-02 | 835370.57154572 |
| 3 | 2020-03 | 883590.609220147 |
| 4 | 2020-04 | 908070.199005604 |
| 5 | 2020-05 | 880173.187980294 |
| 6 | 2020-06 | 855703.768780828 |
| 7 | 2020-07 | 866688.109365582 |
| 8 | 2020-08 | 883435.270638466 |
| 9 | 2020-09 | 898178.258670211 |
| 10 | 2020-10 | 865361.84878242 |
| 11 | 2020-11 | 888830.131320477 |
| 12 | 2020-12 | 869754.540240884 |
| 13 | 2021-01 | 911491.508267403 |
| 14 | 2021-02 | 824679.587569594 |
| 15 | 2021-03 | 914196.490113139 |
| 16 | 2021-04 | 868060.111692786 |
| 17 | 2021-05 | 006701.068168278 |

```sql
5. Orders with negative quantity or price
SELECT * FROM [online_sales_dataset]
WHERE Quantity < 0 OR UnitPrice < 0;
```

133 %

**Results** | **Messages**

| | InvoiceNo | StockCode | Description | Quantity | InvoiceDate | UnitPrice | CustomerID | Country | Discount | PaymentMethod | ShippingCost | Category | SalesChannel | ReturnStatus | ShipmentProvider | Wa |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 359178 | SKU_1386 | USB Cable | -30 | 2020-01-01 04:00:00.0000000 | -68.1100006103516 | NULL | United Kingdom | 1.50143301486969 | Bank Transfer | NULL | Electronics | In-store | Not Returned | FedEx | NU |
| 2 | 451279 | SKU_1617 | Wall Clock | -2 | 2020-01-07 00:00:00.0000000 | 34.060001373291 | NULL | Spain | 0.340000003576279 | Credit Card | NULL | Furniture | Online | Not Returned | DHL | NU |
| 3 | 747972 | SKU_1514 | Desk Lamp | -26 | 2020-01-07 03:00:00.0000000 | -72.3300018310547 | NULL | Netherlands | 1.97208654880524 | paypall | NULL | Electronics | In-store | Not Returned | Royal Mail | NU |
| 4 | 318969 | SKU_1115 | Desk Lamp | -19 | 2020-01-07 23:00:00.0000000 | -3.60999989509583 | NULL | Italy | 1.05225431919098 | Credit Card | NULL | Apparel | In-store | Not Returned | UPS | NU |
| 5 | 285340 | SKU_1710 | Blue Pen | -3 | 2020-01-08 08:00:00.0000000 | 85.9499969482422 | NULL | Netherlands | 0.259999990463257 | Credit Card | NULL | Accessories | In-store | Not Returned | UPS | NU |
| 6 | 867595 | SKU_1343 | White Mug | -2 | 2020-01-09 07:00:00.0000000 | -96.0800018310547 | NULL | Portugal | 1.70208752155304 | Bank Transfer | NULL | Accessories | Online | Not Returned | FedEx | NU |
| 7 | 937291 | SKU_1936 | Wall Clock | -16 | 2020-01-11 22:00:00.0000000 | -73.5999984741211 | NULL | Germany | 1.53543996810913 | Credit Card | NULL | Electronics | Online | Not Returned | DHL | NU |
| 8 | 212547 | SKU_1552 | Wall Clock | -26 | 2020-01-13 04:00:00.0000000 | -51.939998626709 | NULL | Norway | 1.5234671831131 | Credit Card | NULL | Stationery | In-store | Not Returned | FedEx | NU |
| 9 | 710269 | SKU_1024 | Wireless Mouse | -11 | 2020-01-14 02:00:00.0000000 | -44.4000015258789 | NULL | Germany | 1.64775383472443 | Bank Transfer | NULL | Apparel | Online | Not Returned | UPS | NU |
| 10 | 391999 | SKU_1593 | Office Chair | -18 | 2020-01-14 18:00:00.0000000 | 16.9799995422363 | NULL | Australia | 0.209999993443489 | paypall | NULL | Apparel | Online | Not Returned | Royal Mail | NU |
| 11 | 798376 | SKU_1242 | Blue Pen | -38 | 2020-01-14 20:00:00.0000000 | -76.9499969482422 | NULL | Sweden | 0.349999994039536 | paypall | NULL | Apparel | In-store | Not Returned | UPS | NU |
| 12 | 421184 | SKU_1345 | Wall Clock | -39 | 2020-01-15 05:00:00.0000000 | 84.8600006103516 | NULL | Sweden | 0.280000001192093 | Bank Transfer | NULL | Electronics | In-store | Not Returned | Royal Mail | NU |
| 13 | 760960 | SKU_1535 | Notebook | -15 | 2020-01-17 15:00:00.0000000 | 27.2999992370605 | NULL | Sweden | 0.409999996423721 | paypall | NULL | Accessories | In-store | Returned | FedEx | NU |
| 14 | 787995 | SKU_1399 | USB Cable | -32 | 2020-01-18 08:00:00.0000000 | -98.6100006103516 | NULL | France | 1.58077704906464 | Bank Transfer | NULL | Accessories | Online | Not Returned | UPS | NU |
| 15 | 258823 | SKU_1229 | White Mug | -47 | 2020-01-19 22:00:00.0000000 | 98.1500015258789 | NULL | Germany | 0.140000000596046 | Credit Card | NULL | Apparel | In-store | Returned | DHL | NU |

```sql
6. Orders with missing customer id
SELECT * FROM [dbo].[online_sales_dataset]
WHERE CustomerID IS NULL;
```

133 %

Results | Messages

| | InvoiceNo | StockCode | Description | Quantity | InvoiceDate | UnitPrice | CustomerID | Country | Discount | PaymentMethod | ShippingCost | Category | SalesChannel | ReturnStatus | ShipmentProvide |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 359178 | SKU_1386 | USB Cable | -30 | 2020-01-01 04:00:00.0000000 | -68.1100006103516 | NULL | United Kingdom | 1.50143301486969 | Bank Transfer | NULL | Electronics | In-store | Not Returned | FedEx |
| 2 | 655839 | SKU_1047 | Office Chair | 48 | 2020-01-03 01:00:00.0000000 | 4.73999977111816 | NULL | Belgium | 0.219999998807907 | Credit Card | 23.1100006103516 | Accessories | Online | Not Returned | UPS |
| 3 | 305041 | SKU_1731 | Desk Lamp | 45 | 2020-01-03 14:00:00.0000000 | 54.7900009155273 | NULL | United Kingdom | 0.230000004172325 | Credit Card | 8.97000026702881 | Accessories | In-store | Not Returned | DHL |
| 4 | 672843 | SKU_1953 | Headphones | 3 | 2020-01-03 23:00:00.0000000 | 99.1699981689453 | NULL | United States | 0.0299999993294477 | paypall | 11.5799999237061 | Stationery | Online | Not Returned | DHL |
| 5 | 124300 | SKU_1951 | Headphones | 8 | 2020-01-05 07:00:00.0000000 | 46.189998626709 | NULL | Norway | 0.100000001490116 | Bank Transfer | 12.8100004196167 | Stationery | In-store | Not Returned | UPS |
| 6 | 451279 | SKU_1617 | Wall Clock | -2 | 2020-01-07 00:00:00.0000000 | 34.060001373291 | NULL | Spain | 0.340000003576279 | Credit Card | NULL | Furniture | Online | Not Returned | DHL |
| 7 | 747972 | SKU_1514 | Desk Lamp | -26 | 2020-01-07 03:00:00.0000000 | -72.3300018310547 | NULL | Netherlands | 1.97208654880524 | paypall | NULL | Electronics | In-store | Not Returned | Royal Mail |
| 8 | 318969 | SKU_1115 | Desk Lamp | -19 | 2020-01-07 23:00:00.0000000 | -3.60999989509583 | NULL | Italy | 1.05225431919098 | Credit Card | NULL | Apparel | In-store | Not Returned | UPS |
| 9 | 872838 | SKU_1491 | Wall Clock | 21 | 2020-01-08 05:00:00.0000000 | 32.0699996948242 | NULL | Belgium | 0.00999999977648258 | Credit Card | 9.78999996185303 | Stationery | In-store | Not Returned | FedEx |
| 10 | 285340 | SKU_1710 | Blue Pen | -3 | 2020-01-08 08:00:00.0000000 | 85.9499969482422 | NULL | Netherlands | 0.259999990463257 | Credit Card | NULL | Accessories | In-store | Not Returned | UPS |
| 11 | 542296 | SKU_1447 | Headphones | 45 | 2020-01-09 03:00:00.0000000 | 56.4199981689453 | NULL | Germany | 0.419999986886978 | Bank Transfer | 25.2700004577637 | Apparel | Online | Returned | UPS |
| 12 | 981691 | SKU_1962 | Backpack | 3 | 2020-01-09 06:00:00.0000000 | 2.73000001907349 | NULL | Portugal | 0.0900000035762787 | Credit Card | 17.3999996185303 | Accessories | In-store | Not Returned | UPS |
| 13 | 867595 | SKU_1343 | White Mug | -2 | 2020-01-09 07:00:00.0000000 | -96.0800018310547 | NULL | Portugal | 1.70208752155304 | Bank Transfer | NULL | Accessories | Online | Not Returned | FedEx |
| 14 | 227948 | SKU_1009 | Office Chair | 18 | 2020-01-10 00:00:00.0000000 | 42.6300010681152 | NULL | United States | 0.300000011920929 | Credit Card | 19.6900005340576 | Stationery | In-store | Not Returned | UPS |
| 15 | 328576 | SKU_1327 | Wall Clock | 7 | 2020-01-10 09:00:00.0000000 | 68.379997253418 | NULL | Netherlands | 0.140000000596046 | Credit Card | 16.6299991607666 | Electronics | Online | Not Returned | FedEx |

```sql
7. Total shipping cost per shipment provider
SELECT ShipmentProvider,SUM(ShippingCost) AS TotalShippingCost FROM [online_sales_dataset]
GROUP BY ShipmentProvider
ORDER BY TotalShippingCost DESC;
```

133 %

**Results** **Messages**

| | ShipmentProvider | TotalShippingCost |
|---|---|---|
| 1 | FedEx | 208815.779973507 |
| 2 | Royal Mail | 207502.290050983 |
| 3 | DHL | 205760.270021439 |
| 4 | UPS | 205290.430053234 |

```sql
8. Top countries by number of returns
SELECT Country, COUNT(*) AS ReturnCount FROM [online_sales_dataset]
WHERE ReturnStatus = 'Returned'
GROUP BY Country
ORDER BY ReturnCount DESC;
```

33 %

Results | Messages

| | Country | ReturnCount |
|---|---|---|
| 1 | Australia | 429 |
| 2 | Germany | 427 |
| 3 | Belgium | 423 |
| 4 | Sweden | 419 |
| 5 | United Kingdom | 411 |
| 6 | France | 410 |
| 7 | Portugal | 405 |
| 8 | United States | 403 |
| 9 | Italy | 398 |
| 10 | Netherlands | 394 |
| 11 | Norway | 394 |
| 12 | Spain | 381 |

9. Average unit price per product category

```sql
SELECT Category, AVG(UnitPrice) AS AvgPrice FROM [online_sales_dataset]
GROUP BY Category;
```

133 %

**Results** | **Messages**

| | Category | AvgPrice |
|---|---|---|
| 1 | Apparel | 47.9976683121238 |
| 2 | Stationery | 47.3712499920012 |
| 3 | Accessories | 47.461282197981 |
| 4 | Electronics | 47.575696288597 |
| 5 | Furniture | 47.2906118412899 |

```sql
10. Customers with the highest total spend
SELECT Top(10) CustomerID, SUM(Quantity * UnitPrice) AS TotalSpent FROM [online_sales_dataset]
WHERE CustomerID IS NOT NULL
GROUP BY CustomerID
ORDER BY TotalSpent DESC
```

133 %

Results | Messages

| | CustomerID | TotalSpent |
|---|---|---|
| 1 | 21733 | 11806.3596801758 |
| 2 | 14461 | 11584.5499777794 |
| 3 | 68777 | 10987.3601913452 |
| 4 | 81067 | 10869.6801452637 |
| 5 | 98923 | 10420.5299682617 |
| 6 | 84431 | 10332.1101303101 |
| 7 | 72172 | 10115.41015625 |
| 8 | 52808 | 10063.920135498 |
| 9 | 42177 | 9946.78974151611 |
| 10 | 81631 | 9860.60976028442 |

```sql
11. Sales by warehouse location
SELECT WarehouseLocation, SUM(Quantity * UnitPrice) AS TotalSales FROM [online_sales_dataset]
GROUP BY WarehouseLocation
ORDER BY TotalSales DESC;
```

133 %

⊞ Results  ⬚ Messages

| | WarehouseLocation | TotalSales |
|---|---|---|
| 1 | Amsterdam | 11810017.1085383 |
| 2 | Rome | 11676284.4881352 |
| 3 | Berlin | 11661630.9659841 |
| 4 | London | 11656747.7719861 |
| 5 | Paris | 11471171.5704511 |
| 6 | NULL | 1866681.17537069 |

```sql
12. Identify Duplicate Invoices
SELECT InvoiceNo, COUNT(*) AS Count FROM [online_sales_dataset]
GROUP BY InvoiceNo
HAVING COUNT(*) > 1;
```

133 % ▾

Results | Messages

| | InvoiceNo | Count |
|---|---|---|
| 1 | 197143 | 2 |
| 2 | 365976 | 2 |
| 3 | 756884 | 2 |
| 4 | 465890 | 2 |
| 5 | 622349 | 2 |
| 6 | 218222 | 2 |
| 7 | 738447 | 2 |
| 8 | 633893 | 2 |
| 9 | 651872 | 2 |
| 10 | 225885 | 2 |
| 11 | 231458 | 2 |
| 12 | 583843 | 2 |
| 13 | 514526 | 2 |
| 14 | 457752 | 2 |
| 15 | 646900 | 2 |
| 16 | 921186 | 2 |
| 17 | 072522 | 2 |