1. Find the total revenue (price × quantity) for each item, sorted from highest to lowest.

db.sales.aggregate([

{

$group: {

\_id: "$item",

totalRevenue: { $sum: { $multiply: ["$price", "$quantity"] } }

}

},

{

$sort: { totalRevenue: -1 }

}

]);

2. Calculate the total quantity sold per month in 2022.

db.sales.aggregate([

{

$group: {

\_id: { $month: "$date" },

totalQuantity: { $sum: "$quantity" }

}

},

{

$sort: { "\_id": 1 }

}

]);

3. Find all items where price is greater than 10 and size is not 'Short'.

db.sales.find({

price: { $gt: 10 },

size: { $ne: "Short" }

});

4. Get all Cappuccino sales with quantity between 10 and 20.

db.sales.find({

item: "Cappuccino",

quantity: { $gte: 10, $lte: 20 }

});

5. Query to find items where the item name starts with “A".

db.sales.find({

item: /^A/

});

6. Find all records that do not have the field size.

db.sales.find({

size: { $exists: false }

});

7. Find all sales that are either "Grande" or "Tall" but not “Americanos”.

db.sales.find({

size: { $in: ["Grande", "Tall"] },

item: { $ne: "Americanos" }

});

8. List all items sold in February 2022.

db.sales.find({

date: {

$gte: ISODate("2022-02-01"),

$lt: ISODate("2022-03-01")

}

});

9. Find sales where the quantity is more than twice the price.

db.sales.find({

$where: "this.quantity > (this.price \* 2)"

});

10. Find all sales where the price is greater than the average price of their respective size.

11. Find Sales Where the Day of Week Matches Quantity's Last Digit

[Filter sales where the day of the week (0=Sunday, 1=Monday, etc.) matches the last digit of quantity]

db.sales.find({

$where: "this.date.getDay() === this.quantity % 10"

});

12. Find Sales Where the Month is Prime and Quantity is Odd

[Filter sales where the month (1-12) is a prime number (2,3,5,7,11) AND quantity is odd]

13. Find Sales with "Suspicious Quantities" (Divisible by 5 or 7)

[Filter sales where quantity is divisible by 5 or 7]

db.sales.find({

$or: [

{ quantity: { $mod: [5, 0] } },

{ quantity: { $mod: [7, 0] } }

]

});