13. In the sales collection, group sales by category and calculate the total revenue, total profit, and the average profit margin for each category.

```
db.sales.aggregate([
  {
    $addFields: {
      revenue: { $multiply: ["$quantity", "$price"] },
      profit: {
        $multiply: ["$quantity", { $subtract: ["$price", "$cost"] }]
      },
      profitMargin: {
        $cond: {
          if: { $eq: ["$price", 0] },
          then: 0,
          else: { $divide: [{ $subtract: ["$price", "$cost"] }, "$price"] }
        }
      }
    }
  },
  {
    $group: {
      _id: "$category",
      totalRevenue: { $sum: "$revenue" },
      totalProfit: { $sum: "$profit" },
      averageProfitMargin: { $avg: "$profitMargin" }
    }
  },
  {
    $sort: { totalRevenue: -1 }
  }
]);
```