Question 1:

```
--Q1
SELECT*FROM retailsales;
--Q2
SELECT transcation_id,
date,
```

Results | Chart

	TRANSCATION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
1	1	2023/11/24	CUST001	Male	34	Beauty	3	50	150
2	2	2023/02/27	CUST002	Female	26	Clothing	2	500	1000
3	3	2023/01/13	CUST003	Male	50	Electronics	1	30	30
4	4	2023/05/21	CUST004	Male	37	Clothing	1	500	500
5	5	2023/05/06	CUST005	Male	30	Beauty	2	50	100
6	6	2023/04/25	CUST006	Female	45	Beauty	1	30	30
7	7	2023/03/13	CUST007	Male	46	Clothing	2	25	50

Question 2:

```
SELECT transcation_id,
date,
customer_id
FROM retailsales;
```

Results | Chart

	TRANSCATION_ID	DATE	CUSTOMER_ID
1	1	2023/11/24	CUST001
2	2	2023/02/27	CUST002
3	3	2023/01/13	CUST003
4	4	2023/05/21	CUST004
5	5	2023/05/06	CUST005
6	6	2023/04/25	CUST006
7	7	2023/03/13	CUST007

Question 3:

```
--Q3
SELECT DISTINCT product_category
FROM retailsales;
--Q4
SELECT DISTINCT gender
FROM retailsales;
--Q5
```

Results | Chart

PRODUCT_CATEGORY
Beauty
Clothing
Electronics

Question 4:

```
SELECT DISTINCT gender
FROM retailsales;
--Q5
```

Results | Chart

	GENDER
1	Male
2	Female

Question 5:

```
15  SELECT* FROM retailsales
16  WHERE age>40;
17  --Q6
```

Results | Chart

	TRANSCATION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
1	3	2023/01/13	CUST003	Male	50	Electronics	1	30	30
2	6	2023/04/25	CUST006	Female	45	Beauty	1	30	30
3	7	2023/03/13	CUST007	Male	46	Clothing	2	25	50
4	9	2023/12/13	CUST009	Male	63	Electronics	2	300	600
5	10	2023/10/07	CUST010	Female	52	Clothing	4	50	200
6	14	2023/01/17	CUST014	Male	64	Clothing	4	30	120
7	15	2023/01/16	CUST015	Female	42	Electronics	4	500	2000
8	18	2023/04/30	CUST018	Female	47	Electronics	2	25	50
9	19	2023/09/16	CUST019	Female	62	Clothing	2	25	50
10	21	2023/01/14	CUST021	Female	50	Beauty	1	500	500
11	24	2023/11/29	CUST024	Female	49	Clothing	1	300	300

Question 6:

```
17  --Q6
18  SELECT*FROM retailsales
19  WHERE price_per_unit BETWEEN 100 AND 500;
20  --Q7
```

Results | Chart

TRANSCATION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
2	2023/02/27	CUST002	Female	26	Clothing	2	500	1000
4	2023/05/21	CUST004	Male	37	Clothing	1	500	500
9	2023/12/13	CUST009	Male	63	Electronics	2	300	600
13	2023/08/05	CUST013	Male	22	Electronics	3	500	1500
15	2023/01/16	CUST015	Female	42	Electronics	4	500	2000
16	2023/02/17	CUST016	Male	19	Clothing	3	500	1500
20	2023/11/05	CUST020	Male	22	Clothing	3	300	900
21	2023/01/14	CUST021	Female	50	Beauty	1	500	500
24	2023/11/29	CUST024	Female	49	Clothing	1	300	300
26	2023/10/07	CUST026	Female	28	Electronics	2	500	1000
28	2023/04/23	CUST028	Female	43	Beauty	1	500	500
30	2023/10/29	CUST030	Female	39	Beauty	3	300	900

Question 7:

```
21  SELECT*FROM retailsales
22  WHERE PRODUCT_CATEGORY = 'Beauty' OR PRODUCT_CATEGORY = 'Electronics'
23  --Q8
24  SELECT*FROM retailsales
```

Results | Chart

TRANSCATION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
1	2023/11/24	CUST001	Male	34	Beauty	3	50	150
3	2023/01/13	CUST003	Male	50	Electronics	1	30	30
5	2023/05/06	CUST005	Male	30	Beauty	2	50	100
6	2023/04/25	CUST006	Female	45	Beauty	1	30	30
8	2023/02/22	CUST008	Male	30	Electronics	4	25	100
9	2023/12/13	CUST009	Male	63	Electronics	2	300	600
12	2023/10/30	CUST012	Male	35	Beauty	3	25	75
13	2023/08/05	CUST013	Male	22	Electronics	3	500	1500
15	2023/01/16	CUST015	Female	42	Electronics	4	500	2000

Question 8:

```
--Q8
SELECT*FROM retailsales
WHERE PRODUCT_CATEGORY NOT IN ('Clothing')
--Q9
SELECT*FROM retailsales
WHERE QUANTITY >= 3
--Q10
```

Results | Chart

TRANSCATION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
1	2023/11/24	CUST001	Male	34	Beauty	3	50	150
3	2023/01/13	CUST003	Male	50	Electronics	1	30	30
5	2023/05/06	CUST005	Male	30	Beauty	2	50	100
6	2023/04/25	CUST006	Female	45	Beauty	1	30	30
8	2023/02/22	CUST008	Male	30	Electronics	4	25	100
9	2023/12/13	CUST009	Male	63	Electronics	2	300	600
12	2023/10/30	CUST012	Male	35	Beauty	3	25	75
13	2023/08/05	CUST013	Male	22	Electronics	3	500	1500
15	2023/01/16	CUST015	Female	42	Electronics	4	500	2000
18	2023/04/30	CUST018	Female	47	Electronics	2	25	50
21	2023/01/14	CUST021	Female	50	Beauty	1	500	500

Question 9:

```
--Q9
SELECT*FROM retailsales
WHERE QUANTITY >= 3
--Q10
```

Results | Chart

TRANSCATION_ID	DATE	CUSTOMER_ID	GENDER	AGE	PRODUCT_CATEGORY	QUANTITY	PRICE_PER_UNIT	TOTAL_AMOUNT
1	2023/11/24	CUST001	Male	34	Beauty	3	50	150
8	2023/02/22	CUST008	Male	30	Electronics	4	25	100
10	2023/10/07	CUST010	Female	52	Clothing	4	50	200
12	2023/10/30	CUST012	Male	35	Beauty	3	25	75
13	2023/08/05	CUST013	Male	22	Electronics	3	500	1500
14	2023/01/17	CUST014	Male	64	Clothing	4	30	120
15	2023/01/16	CUST015	Female	42	Electronics	4	500	2000
16	2023/02/17	CUST016	Male	19	Clothing	3	500	1500
17	2023/04/22	CUST017	Female	27	Clothing	4	25	100
20	2023/11/05	CUST020	Male	22	Clothing	3	300	900

Question 10:

```
--Q10
SELECT COUNT(*) AS total_transcations
FROM retailsales;
```

Results | Chart

TOTAL_TRANSCATIONS
1000

Question 11:

```
SELECT AVG(age)
FROM retailsales;
--Q12
```

Results | Chart

AVG(AGE)
41.392000

Question 12:

```
34  FROM retailsales;
35  --Q12
36  SELECT SUM(quantity) AS total_quantity
37  FROM retailsales;
38  --Q13
```

Results | Chart

	TOTAL_QUANTITY
1	2514

Question 13:

```
38  --Q13
39  SELECT MAX(total_amount)
40  FROM retailsales;
41  --Q14
```

Results | Chart

	MAX(TOTAL_AMOUNT)
1	2000

Question 14:

```
41  --Q14
42  SELECT MIN(price_per_unit)
43  FROM retailsales;
44  --Q15
```

Results | Chart

	MIN(PRICE_PER_UNIT)
1	25

Question 15:

```
44  --Q15
45  SELECT COUNT(DISTINCT transcation_id) AS transcation_count,
46  product_category
47  FROM retailsales
48  GROUP BY 2;
```

Results | Chart

	TRANSCATION_COUNT	PRODUCT_CATEGORY
1	307	Beauty
2	351	Clothing
3	342	Electronics

Question 16:

```
49  --Q16
50  SELECT SUM(total_amount) total_revenue,
51  gender
52  FROM retailsales
53  GROUP BY gender;
54  --Q17
```

Results | Chart

	TOTAL_REVENUE	GENDER
1	223160	Male
2	232840	Female

Question 17:

```
--Q17
SELECT SUM(price_per_unit) average_price,
product_category
FROM retailsales
GROUP BY product_category;
--Q18
```

Results | Chart

	AVERAGE_PRICE	PRODUCT_CATEGORY
1	56505	Beauty
2	61175	Clothing
3	62210	Electronics

Question 18:

```
--Q18
SELECT SUM(total_amount) AS total_revenue,
product_category
FROM retailsales
GROUP BY product_category
HAVING SUM(total_amount) > 1000;
--Q19
```

Results | Chart

	TOTAL_REVENUE	PRODUCT_CATEGORY
1	143515	Beauty
2	155580	Clothing
3	156905	Electronics

Question 19:

```
--Q19
SELECT AVG(quantity) AS Average_Quantity,
product_category
FROM retailsales
GROUP BY product_category
HAVING AVG(quantity)>2
--Q20
```

Results | Chart

	AVERAGE_QUANTITY	PRODUCT_CATEGORY
1	2.511401	Beauty
2	2.547009	Clothing
3	2.482456	Electronics

Question 20:

```
SELECT
COUNT(DISTINCT TRANSCATION_ID) AS transcation_id,
CASE
WHEN SUM(total_amount)>1000 THEN 'High'
ELSE'Low'
END AS spending_level
FROM retailsales
GROUP BY ALL;
--Q21
```

Results | Chart

	TRANSCATION_ID	SPENDING_LEVEL
1	1000	High

Question 21:

```sql
--Q21
SELECT
customer_id,
age,
CASE
WHEN age<30 THEN 'youth'
WHEN age BETWEEN 30 AND 59 THEN 'adult'
ELSE 'senior'
END AS age_group
FROM retailsales;
```

Results | Chart

	CUSTOMER_ID	AGE	AGE_GROUP
1	CUST001	34	adult
2	CUST002	26	youth
3	CUST003	50	adult
4	CUST004	37	adult
5	CUST005	30	adult
6	CUST006	45	adult
7	CUST007	46	adult
8	CUST008	30	adult
9	CUST009	63	senior
10	CUST010	52	adult
11	CUST011	23	youth
12	CUST012	35	adult
13	CUST013	22	youth
14	CUST014	64	senior