Q 1) How many transactions were completed during each marketing campaign?

```
126
127 /* Q 1) How many transactions were completed during each marketing campaign? */
128 select campaign_name, count(transaction_id) as no_of_transactions
129 from transactions t
130 join marketing_campaigns m on t.purchase_date between m.start_date and m.end_date
131 group by campaign_name;
132
```

Data output | Messages | Notifications

	campaign_name character varying (100)	no_of_transactions bigint
1	New Collection Launch	9
2	Super Save	8
3	Summer Sale	13

Q 2 Which product had the highest sales quantity?

```
133 /* 2. Which product had the highest sales quantity? */
134 with cte as
135 (select t.product_id, product_name, sum(quantity) as total_sold_quantity
136 from transactions t
137 inner join sustainable_clothing s  on t.product_id = s.product_id
138 group by t.product_id, product_name
139 order by total_sold_quantity desc)
140
141 select *
142 from cte
143 where total_sold_quantity in (select max(total_sold_quantity) from cte);
144
```

Data output | Messages | Notifications

	product_id integer	product_name character varying (100)	total_sold_quantity bigint
1	12	Organic Cotton Sweater	9

Q 3 What is the total revenue generated from each marketing campaign?

```
145
146 /* Q 3  What is the total revenue generated from each marketing campaign? */
147
148 select campaign_name, CAST(SUM(t.quantity * s.price) AS NUMERIC(10, 2)) as total_revenue
149 from transactions t
150 join sustainable_clothing s on t.product_id = s.product_id
151 join marketing_campaigns m on t.purchase_date between m.start_date and end_date
152 group by campaign_name;
153
```

Data output | Messages | Notifications

	campaign_name character varying (100)	total_revenue numeric (10,2)
1	New Collection Launch	499.89
2	Super Save	529.89
3	Summer Sale	1044.82

Q 4. What is the top-selling product category based on the total revenue generated?

```
154 /* Q 4 What is the top-selling product category based on the total revenue generated? */
155
156 SELECT s.category, CAST(SUM(t.quantity * s.price) AS NUMERIC(10, 2)) AS revenue_generated
157 FROM sustainable_clothing s
158 JOIN transactions t ON t.product_id = s.product_id
159 GROUP BY s.category
160 order by revenue_generated desc
161 limit 1;
162
```

Data output | Messages | Notifications

	category character varying (50)	revenue_generated numeric (10,2)
1	Bottoms	1289.79

Q 5. Which products had a higher quantity sold compared to the average quantity sold?

```
163  /* 5. Which products had a higher quantity sold compared to the average quantity sold? */
164
165  select t.product_id, s.product_name, t.quantity
166  from transactions t
167  join sustainable_clothing s on t.product_id = s.product_id
168  where t.quantity > (SELECT AVG(quantity) FROM transactions);
```

Data output | Messages | Notifications

	product_id integer	product_name character varying (100)	quantity integer
1	2	Recycled Denim Jeans	2
2	5	Eco-Friendly Hoodie	2
3	19	Organic Cotton Socks	2
4	10	Bamboo Yoga Leggings	2
5	18	Linen Jumpsuit	2
6	6	Linen Button-Down Shirt	2
7	9	Recycled Polyester Jac...	2
8	12	Organic Cotton Sweater	2
9	19	Organic Cotton Socks	2
10	16	Hemp Baseball Cap	2
11	12	Organic Cotton Sweater	2
12	15	Organic Cotton Skirt	2
13	11	Hemp Overalls	2
14	5	Eco-Friendly Hoodie	2
15	12	Organic Cotton Sweater	2
16	18	Linen Jumpsuit	2
17	12	Organic Cotton Sweater	2

6. What is the average revenue generated per day during the marketing campaigns?

```
171  /* 6. What is the average revenue generated per day during the marketing campaigns? */
172
173  select t.purchase_date, (CAST(avg(t.quantity * s.price) AS NUMERIC(10, 2))) AS avg_revenue_generated
174  FROM sustainable_clothing s
175  JOIN transactions t ON t.product_id = s.product_id
176  group by 1
177  order by avg_revenue_generated desc;
```

	purchase_date date	avg_revenue_generated numeric (10,2)
1	2023-09-19	149.98
2	2023-06-26	139.98
3	2023-07-12	124.99
4	2023-06-05	119.98
5	2023-09-30	119.98
6	2023-06-02	109.99
7	2023-06-15	109.98
8	2023-07-24	99.98
9	2023-09-01	99.98
10	2023-10-03	94.99
11	2023-10-08	84.98
12	2023-10-13	83.98
13	2023-10-10	83.32
14	2023-06-07	79.99
15	2023-06-18	79.99
16	2023-09-23	79.99
17	2023-09-14	79.99
18	2023-10-05	74.99
19	2023-07-16	74.99
20	2023-10-02	69.99
21	2023-10-06	69.99
22	2023-08-27	69.99
23	2023-09-28	69.99

Q 7. What is the percentage contribution of each product to the total revenue?

```
178
179 /* 7. What is the percentage contribution of each product to the total revenue? */
180
181 SELECT s.product_id, s.product_name, CAST((SUM(t.quantity * s.price) / total_revenue) * 100 AS NUMERIC(10, 2)) AS contribution_percentage
182 FROM sustainable_clothing s
183 JOIN transactions t ON t.product_id = s.product_id
184 CROSS JOIN (SELECT SUM(t.quantity * s.price) AS total_revenue
185             FROM sustainable_clothing s
186             JOIN transactions t ON t.product_id = s.product_id) AS revenue_total
187 GROUP BY s.product_id, s.product_name, total_revenue
188 order by contribution_percentage desc;
189
```

	product_id [PK] integer	product_name character varying (100)	contribution_percentage numeric (10,2)
1	2	Recycled Denim Jeans	13.71
2	18	Linen Jumpsuit	10.49
3	12	Organic Cotton Sweater	9.64
4	10	Bamboo Yoga Leggings	9.42
5	9	Recycled Polyester Jac…	7.71
6	5	Eco-Friendly Hoodie	6.42
7	4	Bamboo Lounge Pants	5.35
8	17	Upcycled Denim Jacket	5.14
9	11	Hemp Overalls	4.82
10	7	Organic Cotton Dress	4.50
11	15	Organic Cotton Skirt	3.75
12	13	Cork Sandals	3.43
13	20	Bamboo Bathrobe	3.00
14	16	Hemp Baseball Cap	2.68
15	14	Recycled Nylon Backp…	2.57
16	6	Linen Button-Down Shirt	2.57
17	19	Organic Cotton Socks	1.50
18	8	Sustainable Swim Shor…	1.50
19	1	Organic Cotton T-Shirt	1.28
20	3	Hemp Crop Top	0.54

Q 8. Compare the average quantity sold during marketing campaigns to outside the marketing campaigns

```
189
190 /* 8. Compare the average quantity sold during marketing campaigns to outside the marketing campaigns */
191
192 with cte as
193 (select avg(quantity) as avg_qty_during_campaign
194 from transactions t
195 join sustainable_clothing s on t.product_id=s.product_id
196 join marketing_campaigns m on t.purchase_date between m.start_date and m.end_date
197     and t.product_id=m.product_id),
198
199 cte2 as
200 (select avg(quantity) as total_avg_qty
201 from transactions t
202 join sustainable_clothing s on t.product_id=s.product_id)
203
204 select total_avg_qty, avg_qty_during_campaign,
205     total_avg_qty-avg_qty_during_campaign as avg_qty_outside_campaign
206 from cte, cte2;
207
```

Data output | Messages | Notifications

	total_avg_qty numeric	avg_qty_during_campaign numeric	avg_qty_outside_campaign numeric
1	1.3750000000000000	1.1000000000000000	0.2750000000000000

Q 9. Compare the revenue generated by products inside the marketing campaigns to outside the campaigns

```
/* Q 9 Compare the revenue generated by products inside the marketing campaigns to outside the campaigns */

WITH cte AS (
  SELECT round(sum(quantity * price)::numeric, 2) AS rev_during_campaign
  FROM transactions t
  JOIN sustainable_clothing s ON t.product_id = s.product_id
  JOIN marketing_campaigns m ON t.purchase_date BETWEEN m.start_date AND m.end_date
    AND t.product_id = m.product_id
),
cte2 AS (
  SELECT round(sum(quantity * price)::numeric, 2) AS total_revenue
  FROM transactions t
  JOIN sustainable_clothing s ON t.product_id = s.product_id
)

SELECT cte2.total_revenue, cte.rev_during_campaign,
       cte2.total_revenue - cte.rev_during_campaign AS rev_outside_campaign
FROM cte, cte2;
```

Data output | Messages | Notifications

	total_revenue numeric	rev_during_campaign numeric	rev_outside_campaign numeric
1	4669.12	769.89	3899.23

Q 10. Rank the products by their average daily quantity sold

```

/* 10 Rank the products by their average daily quantity sold */

with cte as
(select product_name, avg(quantity) as avg_sold_qty
from transactions t
join sustainable_clothing s on t.product_id=s.product_id
group by 1)

select product_name, avg_sold_qty,
    dense_rank() over(order by avg_sold_qty) as avg_rank
from cte;
```

Data output | Messages | Notifications

	product_name character varying (100)	avg_sold_qty numeric	avg_rank bigint
1	Bamboo Bathrobe	1.000000000000	1
2	Organic Cotton T-Shirt	1.000000000000	1
3	Cork Sandals	1.000000000000	1
4	Hemp Crop Top	1.000000000000	1
5	Organic Cotton Dress	1.000000000000	1
6	Recycled Nylon Backp...	1.000000000000	1
7	Recycled Denim Jeans	1.142857142857	2
8	Hemp Baseball Cap	1.250000000000	3
9	Bamboo Lounge Pants	1.250000000000	3
10	Recycled Polyester Jac...	1.333333333333	4