

1.

SQL 1* SQL 2*

```
1 SELECT *
2 FROM orders
3 LIMIT 10;
```

| | order_id | customer_id | order_status |
|----|----------------------------------|----------------------------------|--------------|
| 1 | e481f51cbdc54678b7cc49136f2d6af7 | 9ef432eb6251297304e76186b10a928d | delivered |
| 2 | 53cdb2fc8bc7dce0b6741e2150273451 | b0830fb4747a6c6d20dea0b8c802d7ef | delivered |
| 3 | 47770eb9100c2d0c44946d9cf07ec65d | 41ce2a54c0b03bf3443c3d931a367089 | delivered |
| 4 | 949d5b44dbf5de918fe9c16f97b45f8a | f88197465ea7920adcdbec7375364d82 | delivered |
| 5 | ad21c59c0840e6cb83a9ceb5573f8159 | 8ab97904e6daea8866dbdbc4fb7aad2c | delivered |
| 6 | a4591c265e18cb1dcee52889e2d8acc3 | 503740e9ca751ccdda7ba28e9ab8f608 | delivered |
| 7 | 136cce7faa42fdb2cef53fdc79a6098 | ed0271e0b7da060a393796590e7b737a | invoiced |
| 8 | 6514b8ad8028c9f2cc2374ded245783f | 9bdf08b4b3b52b5526ff42d37d47f222 | delivered |
| 9 | 76c6e866289321a7c93b82b54852dc33 | f54a9f0e6b351c431402b8461ea51999 | delivered |
| 10 | e69bfb5eb88e0ed6a785585b27e16dbf | 31ad1d1b63eb9962463f764d4e6e0c9d | delivered |

2.

SQL 1* SQL 2* SQL 3*

```
1 SELECT DISTINCT order_status
2 FROM orders;
3
```

| order_status |
|--------------|
| delivered |
| invoiced |
| shipped |
| processing |
| unavailable |
| canceled |
| created |
| approved |

SQL 1* SQL 2* SQL 3* SQL 4*

```
1 SELECT
2     order_status,
3     COUNT(*) AS total_orders
4 FROM orders
5 GROUP BY order_status
6 ORDER BY total_orders DESC;
```

| | order_status | total_orders |
|---|--------------|--------------|
| 1 | delivered | 96478 |
| 2 | shipped | 1107 |
| 3 | canceled | 625 |
| 4 | unavailable | 609 |
| 5 | invoiced | 314 |
| 6 | processing | 301 |
| 7 | created | 5 |
| 8 | approved | 2 |

3.

4.

SQL 1* SQL 2* SQL 3* SQL 4* SQL 5*

```
1 SELECT COUNT(*) AS total_orders
2 FROM orders;
3 |
```

| total_orders |
|--------------|
| 99441 |

5.

SQL 1* SQL 2* SQL 3* SQL 4* SQL 5* SQL 6*

```
1 SELECT
2     STRFTIME('%Y', order_purchase_timestamp) AS order_year,
3     COUNT(*) AS total_orders
4 FROM orders
5 GROUP BY order_year
6 ORDER BY order_year;
7 |
```

| order_year | total_orders |
|------------|--------------|
| 2016 | 329 |
| 2017 | 45101 |
| 2018 | 54011 |

6.

```
SQL 2* SQL 3* SQL 4* SQL 5* SQL 6* SQL 7*
```

```
1 SELECT
2     SUM(payment_value) AS total_revenue
3 FROM payments;
4
```

| total_revenue |
|---------------|
| 1 16008872.12 |

7.

```
SQL 3* SQL 4* SQL 5* SQL 6* SQL 7* SQL 8*
```

```
1 SELECT
2     STRFTIME('%Y', o.order_purchase_timestamp) AS order_year,
3     SUM(p.payment_value) AS yearly_revenue
4 FROM orders o
5 JOIN payments p ON o.order_id = p.order_id
6 GROUP BY order_year
7 ORDER BY order_year;
8
```

| order_year | yearly_revenue |
|------------|----------------|
| 1 2016 | 59362.34 |
| 2 2017 | 7249746.73 |
| 3 2018 | 8699763.05 |

8.

```
SQL 4* SQL 5* SQL 6* SQL 7* SQL 8* SQL 9*
```

```
1 SELECT
2     o.customer_id,
3     SUM(p.payment_value) AS total_spent
4 FROM orders o
5 JOIN payments p ON o.order_id = p.order_id
6 GROUP BY o.customer_id
7 ORDER BY total_spent DESC
8 LIMIT 10;
9
```

| customer_id | total_spent |
|-------------------------------------|-------------|
| 1 1617b1357756262bfa56ab541c47bc16 | 13664.08 |
| 2 ec5b2ba62e574342386871631fafd3fc | 7274.88 |
| 3 c6e2731c5b391845f6800c97401a43a9 | 6929.31 |
| 4 f48d464a0baaea338cb25f816991ab1f | 6922.21 |
| 5 3fd6777bbce08a352fddd04e4a7cc8f6 | 6726.66 |
| 6 05455dfa7cd02f13d132aa7a6a9729c6 | 6081.54 |
| 7 df55c14d1476a9a3467f131269c2477f | 4950.34 |
| 8 e0a2412720e9ea4f26c1ac985f6a7358 | 4809.44 |
| 9 24bbf5fd2f2e1b359ee7de94defc4a15 | 4764.34 |
| 10 3d979689f636322c62418b6346b1c6d2 | 4681.78 |

9.

A screenshot of a SQL interface showing a query and its results. The query is:

```
1 SELECT
2     product_id,
3     COUNT(*) AS total_sales
4 FROM order_items
5 GROUP BY product_id
6 ORDER BY total_sales DESC
7 LIMIT 10;
8
9
```

The results table has two columns: product_id and total_sales. The data is:

| | product_id | total_sales |
|----|-----------------------------------|-------------|
| 1 | aca2eb7d00ea1a7b8ebd4e68314663af | 527 |
| 2 | 99a4788cb24856965c36a24e339b6058 | 488 |
| 3 | 422879e10f46682990de24d770e7f83d | 484 |
| 4 | 389d119b48cf3043d311335e499d9c6b | 392 |
| 5 | 368c6c730842d78016ad823897a372db | 388 |
| 6 | 53759a2ecddad2bb87a079a1f1519f73 | 373 |
| 7 | d1c427060a0f73f6b889a5c7c61f2ac4 | 343 |
| 8 | 53b36df67ebbb7c41585e8d54d6772e08 | 323 |
| 9 | 154e7e31ebfa092203795c972e5804a6 | 281 |
| 10 | 3dd2a17168ec895c781a9191c1e95ad7 | 274 |

10.

A screenshot of a SQL interface showing a CREATE VIEW statement:

```
1 CREATE VIEW IF NOT EXISTS orders_summary AS
2     SELECT
3         o.order_id,
4         o.customer_id,
5         o.order_status,
6         SUM(oi.price + oi.freight_value) AS order_total
7     FROM orders o
8     JOIN order_items oi ON o.order_id = oi.order_id
9     GROUP BY o.order_id;
10
```

A screenshot of a SQL interface showing a query and its results for the orders_summary view:

```
1     SELECT *
2     FROM orders_summary
3     LIMIT 10;
4
```

The results table has four columns: order_id, customer_id, order_status, and order_tot. The data is:

| | order_id | customer_id | order_status | order_tot |
|----|----------------------|----------------------------------|--------------|-----------|
| 1 | a6d1ba2dd792cb16214 | 3ce436f183e68e07877b285a838db11a | delivered | 72.19 |
| 2 | 20c557190d7a144bdd3 | f6dd3ec061db4e3987629fe6b26e5cce | delivered | 259.83 |
| 3 | 4ef6ca0657da4fc703e | 6489ae5e4333f3693df5ad4372dab6d3 | delivered | 216.87 |
| 4 | 6daaa1e931b038114c75 | d4eb9395c8c0431ee92fce09860c5a06 | delivered | 25.78 |
| 5 | 7ce69dfabb4e55b4fd9 | 58dbd0b2d70206bf40e62cd34e84d795 | delivered | 218.04 |
| 6 | c65dbb7d2a0634bc1ea | 816cbea969fe5b689b39cf97a506742 | delivered | 34.59 |
| 7 | 7675808bcb819fb4a32 | 32e2e6ab09e778d99bf2e0ecd4898718 | delivered | 31.75 |
| 8 | 847ccb9d288c5617fa6 | 9ed5e522dd9dd85b4af4a077526d8117 | delivered | 880.75 |
| 9 | d785b8e2b08b904576c | 16150771dfd4776261284213b89c304e | delivered | 157.6 |
| 10 | 53dc1d21e1fb923495 | 351d3cb2cee3c7fd0af6616c82df21d3 | delivered | 65.39 |

11.