SQL set operators allow you to combine or exclude the results from multiple `SELECT` queries. These operators are similar to mathematical set operations. The main set operators in SQL are `UNION`, `INTERSECT`, `EXCEPT` (or `MINUS` in some databases), and there are two variations of union: `UNION` and `UNION ALL`.

## 1. `UNION`:

The `UNION` operator is used to combine the result sets of two or more `SELECT` queries. It eliminates duplicate rows from the results, ensuring that each row is unique.

Example:

```
SELECT column_name FROM table1

UNION

SELECT column_name FROM table2;
```

This will return all unique values in `column_name` from both `table1` and `table2`.

## 2. `UNION ALL`:

`UNION ALL` is similar to `UNION`, but it includes all rows from the result sets of the `SELECT` statements, including duplicates.

Example:

sql

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```
SELECT column_name FROM table1

UNION ALL

SELECT column_name FROM table2;
```

This will return all values in `column_name` from both `table1` and `table2`, including duplicates.

### 3. `INTERSECT`:

The `INTERSECT` operator returns the rows that are present in both of the `SELECT` statement result sets.

Example:

sql

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```sql
SELECT column_name FROM table1

INTERSECT

SELECT column_name FROM table2;
```

This will return rows that appear in `column_name` of both `table1` and `table2`.

### 4. `EXCEPT` (or `MINUS`):

The `EXCEPT` operator returns rows from the first `SELECT` statement that are not present in the second `SELECT` statement's result set.

Example:

sql

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```sql
SELECT column_name FROM table1

EXCEPT
```

```
SELECT column_name FROM table2;
```

This will return rows from `column_name` in `table1` that are not present in `table2`.

In summary:

- `UNION` combines results from multiple `SELECT` statements and removes duplicate rows.
- `UNION ALL` also combines results, but it keeps all duplicate rows.
- `INTERSECT` returns only the rows that appear in both result sets.
- `EXCEPT` returns rows from the first result set that aren't present in the second result set.

It's important to note that when using these set operators, the number and order of columns in the `SELECT` statements must be the same, and the data types have to be compatible.