SQL Join and Aggregation Question

Table A	Table B
1	1
1	2
1	5
2	10
3	6
null	3
7	7

1. Condition 1

```
Select count(*)
from table_a a
left join table_b b on a.key = b.key
```

Output: 7 → 3(1's) + 1(2) +1(3) + null + 1(7)

Table A	**Table B**	**Count(*)**	**Count(key)**
1	1	1	1
1	1	2	2
1	1	3	3
2	2	4	4
3	3	5	5
null		6	
7	7	7	6

2. Condition 2

```
Select count(*)
from table_a a
right join table_b b on a.key = b.key
```

Output: 9 → 3(1's) + 1(2) +1(5) + 1(10) + 1(6) + 1(3) + 1(7)

Table A	**Table B**	**Count(*)**	**Count(key)**
1	1	1	1
1	1	2	2

1	1	3	3
2	2	4	4
5	-	5	5
10	-	6	6
6	-	7	7
3	3	8	8
7	7	9	9

3. Condition 3

```
Select count(*)
from table_a a
inner join table_b b on a.key = b.key
```

Output: 6 → 3(1's) + 1(2) +1(3) + no match - NULLs never equal everything + 1(7)

Table A	**Table B**	**Count(*)**	**Count(key)**
1	1	1	1
1	1	2	2
1	1	3	3
2	2	4	4
3	3	5	5
null	-	❌ (no match — NULLs never equal anything)	
7	7	6	6