



Usage Funnels with Warby Parker

Learn SQL from Scratch

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1. Warby Parker Quiz

My answers to Warby Parker Quiz

1. What are you looking for?
 - Men's styles
2. What's your fit?
 - Medium
3. Which shapes do you like? hat's your fit?
 - Rectangular
4. Which colors do you like?
 - Two-tone
5. Which materials do you like?
 - Metal
6. When was your last eye exam?
 - I'm not sure. Let's skip it
7. Want sunglasses recommendations too?
 - Yes, show me both

Warby Parker Quiz Table

What columns does the table have?

- 1. question
- 2. User_id
- 3. response

```
SELECT *  
FROM survey  
LIMIT 10;
```

question	user_id	response
1. What are you looking for?	005e7f99-d48c-4fce-b605-10506c85aaf7	Women's Styles
2. What's your fit?	005e7f99-d48c-4fce-b605-10506c85aaf7	Medium
3. Which shapes do you like?	00a556ed-f13e-4c67-8704-27e3573684cd	Round
4. Which colors do you like?	00a556ed-f13e-4c67-8704-27e3573684cd	Two-Tone
1. What are you looking for?	00a556ed-f13e-4c67-8704-27e3573684cd	I'm not sure. Let's skip it.
2. What's your fit?	00a556ed-f13e-4c67-8704-27e3573684cd	Narrow
5. When was your last eye exam?	00a556ed-f13e-4c67-8704-27e3573684cd	<1 Year
3. Which shapes do you like?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Square
5. When was your last eye exam?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	<1 Year
2. What's your fit?	00bf9d63-0999-43a3-9e5b-9c372e6890d2	Medium

2. Warby Parker Quiz Funnel

Warby Parker Quiz Funnel

What is the number of responses for each question?

Question 1 : 500 responses

Question 2 : 475 responses

Question 3 : 380 responses

Question 4 : 361 responses

Question 5 : 270 responses

```
SELECT question, COUNT (DISTINCT user_id) AS 'Users'  
FROM survey  
GROUP BY 1;
```

question	Users
1. What are you looking for?	500
2. What's your fit?	475
3. Which shapes do you like?	380
4. Which colors do you like?	361
5. When was your last eye exam?	270

3. Lower Completion Rates

Lower Completion Rates

Which question(s) of the quiz have a lower completion rates?

Question 3: What shapes do you like?

Question 5: When was your last eye exam?

What do you think is the reason?

Question 3.

- Picture layout is not convenient for some users, too cartoonish
- There is not clear understanding how this shape will fit your face (user might not know that home-try-on option is available)

Question 5.

- The first obvious reason might be that person does not remember when it was the last eye exam
- This might be private info for someone and this person would like not to share it
- Some people could think that there is no direct reasoning for that question. Why Warby Parker needs this last eye exam date?

Question	Percent completed this question
1	100 %
2	95 %
3	80 %
4	95 %
5	75 %

Conclusion(assumption) from quiz funnel: Answer "No preference. Let's skip it" is still counted

4. Tables for Purchase Funnel

Table quiz

*Examine the first five rows of each table
What are the column names?*

Table quiz column names:

- user_id
- style
- fit
- shape
- color

```
SELECT *  
FROM quiz  
LIMIT 5;
```

user_id	style	fit	shape	color
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	Women's Styles	Medium	Rectangular	Tortoise
291f1cca-e507-48be-b063-002b14906468	Women's Styles	Narrow	Round	Black
75122300-0736-4087-b6d8-c0c5373a1a04	Women's Styles	Wide	Rectangular	Two-Tone
75bc6ebd-40cd-4e1d-a301-27ddd93b12e2	Women's Styles	Narrow	Square	Two-Tone
ce965c4d-7a2b-4db6-9847-601747fa7812	Women's Styles	Wide	Rectangular	Black

Table home_try_on

*Examine the first five rows of each table
What are the column names?*

Table home_try_on column names:

- user_id
- number_of_pairs
- Address

```
SELECT *  
FROM home_try_on  
LIMIT 5;
```

user_id	number_of_pairs	address
d8addd87-3217-4429-9a01-d56d68111da7	5 pairs	145 New York 9a
f52b07c8-abe4-4f4a-9d39-ba9fc9a184cc	5 pairs	383 Madison Ave
8ba0d2d5-1a31-403e-9fa5-79540f8477f9	5 pairs	287 Pell St
4e71850e-8bbf-4e6b-acco-49a7bb46c586	3 pairs	347 Madison Square N
3bc8f97f-2336-4dab-bd86-e391609dab97	5 pairs	182 Cornelia St

Table purchase

*Examine the first five rows of each table
What are the column names?*

Table purchase column names:

- user_id
- product_id
- style
- model_name
- Color
- price

```
SELECT *  
FROM purchase  
LIMIT 5;
```

user_id	product_id	style	model_name	color	price
00a9dd17-36c8-430c-9d76-df49d4197dcf	8	Women's Styles	Lucy	Jet Black	150
00e15fe0-c86f-4818-9c63-3422211baa97	7	Women's Styles	Lucy	Elderflower Crystal	150
017506f7-aba1-4b9d-8b7b-f4426e71b8ca	4	Men's Styles	Dawes	Jet Black	150
0176bfb3-9c51-4b1c-b593-87edab3c54cb	10	Women's Styles	Eugene Narrow	Rosewood Tortoise	95
01fdf106-f73c-4d3f-a036-2f3e2ab1ce06	8	Women's Styles	Lucy	Jet Black	150

5. Combined Tables for Purchase Funnel

Combined Tables

Select only the first 10 rows from this table

```
SELECT DISTINCT q.user_id,  
                h.user_id IS NOT NULL AS 'is_home_try_on',  
                h.number_of_pairs,  
                p.user_id IS NOT NULL AS 'is_purchase'  
FROM quiz AS 'q'  
LEFT JOIN home_try_on AS 'h'  
      ON q.user_id = h.user_id  
LEFT JOIN purchase AS 'p'  
      ON h.user_id = p.user_id  
LIMIT 10;
```

user_id	is_home_try_on	number_of_pairs	is_purchase
4e8118dc-bb3d-49bf-85fc-cca8d83232ac	1	3 pairs	0
291f1cca-e507-48be-b063-002b14906468	1	3 pairs	1
75122300-0736-4087-b6d8-c0c5373a1a04	0	NULL	0
75bc6ebd-40cd-4e1d-a301-27ddd93b12e2	1	5 pairs	0
ce965c4d-7a2b-4db6-9847-601747fa7812	1	3 pairs	1
28867d12-27a6-4e6a-a5fb-8bb5440117ae	1	5 pairs	1
5a7a7e13-fbcf-46e4-9093-79799649d6c5	0	NULL	0
0143cb8b-bb81-4916-9750-ce956c9f9bd9	0	NULL	0
a4ccc1b3-cbb6-449c-b7a5-03af42c97433	1	5 pairs	0
b1dded76-cd60-4222-82cb-f6d464104298	1	3 pairs	0

6. Warby Parker Purchase Funnel Analysis

Overall conversion rates

Overall conversion rates

- 250 persons did not proceed to home_try_on stage
- Persons who did quiz and proceeded with try at home option are 75%
- Persons who tried at home and then purchased are 66%

```
WITH wpfunnel AS (  
    SELECT DISTINCT q.user_id,  
                   h.user_id IS NOT NULL AS 'is_home_try_on',  
                   h.number_of_pairs,  
                   p.user_id IS NOT NULL AS 'is_purchase'  
    FROM quiz AS 'q'  
    LEFT JOIN home_try_on AS 'h'  
        ON q.user_id = h.user_id  
    LEFT JOIN purchase AS 'p'  
        ON h.user_id = p.user_id)  
SELECT  
    COUNT (*) AS 'num_quiz',  
    SUM(is_home_try_on) AS 'num_home_try_on',  
    SUM(is_purchase) AS 'num_purchase',  
    1.0 * SUM(is_home_try_on) / COUNT(user_id) AS 'quiz to  
home',  
    1.0 * SUM(is_purchase) / SUM(is_home_try_on) AS 'home to  
purchase'  
FROM wpfunnel;
```

num_quiz	num_home_try_on	num_purchase	quiz to home	home to purchase
1000	750	495	0.75	0.66

Number of pairs

Purchase rates between customers who had 3 number_of_pairs with ones who had 5

- Customers with 3 pairs had 53% home to purchase rate
- Customers with 5 pairs had 79% home to purchase rate
- So, A/B test shows that it is better to propose and send 5 pairs for home_to_try option

```
WITH wpfunnel AS (  
    SELECT DISTINCT q.user_id,  
                   h.user_id IS NOT NULL AS 'is_home_try_on',  
                   h.number_of_pairs,  
                   p.user_id IS NOT NULL AS 'is_purchase'  
    FROM quiz AS 'q'  
    LEFT JOIN home_try_on AS 'h'  
        ON q.user_id = h.user_id  
    LEFT JOIN purchase AS 'p'  
        ON h.user_id = p.user_id)  
SELECT  
    number_of_pairs,  
    COUNT (*) AS 'num_quiz',  
    SUM(is_home_try_on) AS 'num_home_try_on',  
    SUM(is_purchase) AS 'num_purchase',  
    ROUND (1.0 * SUM(is_home_try_on) / COUNT(user_id), 2) AS  
'quiz to home',  
    ROUND (1.0 * SUM(is_purchase) / SUM(is_home_try_on), 2) AS  
'home to purchase'  
FROM wpfunnel  
WHERE number_of_pairs IS NOT NULL  
GROUP BY 1  
ORDER BY 1;
```

number_of_pairs	num_quiz	num_home_try_on	num_purchase	quiz to home	home to purchase
3 pairs	379	379	201	1.0	0.53
5 pairs	371	371	294	1.0	0.79

Favorite model

Favorite model is Eugene Narrow

```
SELECT model_name, COUNT(model_name) AS 'Favorite model'  
FROM purchase  
GROUP BY 1  
ORDER BY 2 DESC;
```

model_name	Favorite model
Eugene Narrow	116
Dawes	107
Brady	95
Lucy	86
Olive	50
Monocle	41

Favorite product

Favorite product is product with id 3 and 10

product_id	Favorite product
3	63
10	62
9	54
1	52
6	50
4	44
7	44
2	43
8	42
5	41

```
SELECT product_id, COUNT(product_id) AS 'Favorite product'
FROM purchase
GROUP BY 1
ORDER BY 2 DESC;
```