



# Usage Funnels with Warby Parker

Learn SQL from Scratch

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# 1. Get familiar with WP

# 1. Getting familiar with Warby Parker

## 1. What columns does the table have?

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

Query Results		
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
Database Schema		

- There are 3 columns in the table: Question, User\_id, and Response

# 1. Getting familiar with Warby Parker

## 2. What is the number of responses for each question?

```
1 SELECT question,  
2   COUNT(DISTINCT user_id) AS 'No of Users'  
3 FROM survey  
4 GROUP BY question;
```

Query Results	
question	No of 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. Which question(s) of the quiz have a lower completion rates?

Question	# of Responses	% of last question	% of completion from base
1. What are you looking for?	500	100%	100%
2. What's your fit?	475	95%	95%
3. Which shapes do you like?	380	80%	76%
4. Which colors do you like?	361	95%	72%
5. When was your last eye exam?	270	75%	54%

The question with the lowest completion rate is **Question 5** with only 54% of the original 500 respondents providing an answer. A reason for this could be that users perceive this question to be more personal and do not feel comfortable sharing this information. In addition **Question 5** does not provide reasoning as why the question is being asked and its relevance to selecting a frame.

**Question 3** has a lower completion rate (from the previous question) when compared to Q1,Q2 and Q4, this may be because the user is looking for a recommendation or the right fit to their face type. Overall, close to 50% of the participants stop after Question 4, not finishing the quiz.

## 2. Home try-on funnel

## 2. Home try-on funnel

### 4. What are the column names?

```
1 SELECT *
2 FROM quiz
3 LIMIT 5;
```

Query Results				
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

There are 5 columns in the table:  
User\_id, style, fit, shape and color

```
1 SELECT *
2 FROM home_try_on
3 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

There are 3 columns in the table:  
User\_id, number\_of\_pairs, address

```
1 SELECT *
2 FROM purchase
3 LIMIT 5;
```

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

There are 4 columns in the table:  
User\_id, product\_id, style, model\_name

## 2. Home try-on funnel (Join tables)

*5. Use a LEFT JOIN to combine the three tables, starting with the top of the funnel (browse) and ending with the bottom of the funnel (purchase)*

```
1 SELECT Distinct q.user_id,  
2   hto.user_id IS NOT NULL as 'is_home_try_on',  
3   hto.number_of_pairs,  
4   p.user_id IS NOT NULL as 'is_purchase'  
5 FROM quiz AS q  
6 LEFT JOIN home_try_on AS hto  
7   ON q.user_id = hto.user_id  
8 LEFT JOIN purchase AS p  
9   ON hto.user_id = p.user_id  
10 LIMIT 10;
```

Query Results			
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	Ø	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	Ø	0
0143cb8b-bb81-4916-9750-ce956c9f9bd9	0	Ø	0
a4ccc1b3-cbb6-449c-b7a5-03af42c97433	1	5 pairs	0
b1dded76-cd60-4222-82cb-f6d464104298	1	3 pairs	0



## 2. Home try-on funnel

### 6.1 Overall conversion rates by aggregating across all rows.

```
1  WITH PFunnel As (SELECT Distinct q.user_id,
2     hto.user_id IS NOT NULL as 'is_home_try_on',
3     hto.number_of_pairs,
4     p.user_id IS NOT NULL as 'is_purchase'
5  FROM quiz AS q
6  LEFT JOIN home_try_on AS hto
7     ON q.user_id = hto.user_id
8  LEFT JOIN purchase AS p
9     ON hto.user_id = p.user_id)
10 SELECT
11     count(user_id) as 'Total Users',
12     sum(is_home_try_on) as 'Home Try On Total',
13     sum(is_purchase) as 'Purchase Total',
14     1.0 * SUM(is_home_try_on) / COUNT(user_id) as '% of Users with
    Home Try On',
15     1.0 * SUM(is_purchase) / SUM(is_home_try_on) as '% of Home Try
    on that Purchased'
16 from PFunnel;
```

- Quiz has a base of 1000 users, of which 750 (75%) were apart of the Home Try on testing.
- From the 750 home try on users, 495 (66%) completed a purchase.

#### Query Results

Total Users	Home Try On Total	Purchase Total	% of Users with Home Try On	% of Home Try on that Purchased
1000	750	495	0.75	0.66

## 2. Home try-on funnel

### 6.2 Compare conversion rates from quiz→home\_try\_on and home\_try\_on→purchase

```
1 WITH PFunnel As
2   (SELECT Distinct q.user_id,
3    hto.user_id IS NOT NULL as 'is_home_try_on',
4    hto.number_of_pairs,
5    p.user_id IS NOT NULL as 'is_purchase'
6   FROM quiz AS q
7   LEFT JOIN home_try_on AS hto
8     ON q.user_id = hto.user_id
9   LEFT JOIN purchase AS p
10    ON hto.user_id = p.user_id)
11 SELECT
12   number_of_pairs,
13   count(user_id) as 'Total Users',
14   sum(is_home_try_on) as 'Home Try On Total',
15   sum(is_purchase) as 'Purchase Total',
16   1.0 * SUM(is_purchase) / SUM(is_home_try_on) as '% of
    Home Try on that Purchased'
17 FROM PFunnel
18 GROUP BY number_of_pairs;
```

- 250 users with no home try on made no purchases
- Looking at the A/B testing results, users with 5 pairs of glasses had a higher rate of purchases
- There were 379 users with 3 pairs of glasses to try on, of which 201 made a purchase, a conversion rate of 53%
- There were 371 users with 5 pairs, with 294 making a purchase (conversion rate of 79%)
- From these results we can conclude that providing users with 5 pairs of glasses to try will result in higher purchases

Query Results

number_of_pairs	Total Users	Home Try On Total	Purchase Total	% of Home Try on that Purchased
Ø	250	0	0	Ø
3 pairs	379	379	201	0.530343007915567
5 pairs	371	371	294	0.792452830188679

## 2. Home try-on funnel

### *Additional Insights*

```
1 SELECT style,
2    fit,
3    shape,
4    color,
5    count (*)
6 FROM quiz
7 GROUP BY style, fit, shape,color
8 ORDER BY 5 desc;
```

Query Results				
style	fit	shape	color	count (*)
Men's Styles	Narrow	Rectangular	Tortoise	23
Women's Styles	Narrow	Rectangular	Black	20
Women's Styles	Narrow	Rectangular	Tortoise	20
Men's Styles	Medium	Rectangular	Tortoise	19
Men's Styles	Narrow	Rectangular	Black	18
Men's Styles	Medium	Rectangular	Black	17
Men's Styles	Narrow	Square	Tortoise	16
Women's Styles	Medium	Rectangular	Tortoise	16
Women's Styles	Medium	Square	Tortoise	16
Women's Styles	Narrow	Square	Crystal	16
Men's Styles	Narrow	Square	Black	15
Women's Styles	Medium	Square	Crystal	15
Women's Styles	Narrow	Square	Black	15
Women's Styles	Narrow	Square	Tortoise	15
Women's Styles	Wide	Rectangular	Tortoise	15
Men's Styles	Medium	Rectangular	Crystal	14
Women's Styles	Medium	Rectangular	Black	14

- Top 5 results of the style quiz (highlighted in red)
- Both Women and Men are more interested in styles that are rectangular in shape and Tortoise colour.

## 2. Home try-on funnel

### *Additional Insights*

```
1 SELECT product_id,  
2    model_name,  
3    style,  
4    color,  
5    count(*) AS 'Number of  
   Purchases',  
6    SUM (price) AS 'Total  
   Sales',  
7    price  
8 FROM purchase  
9 GROUP BY 1,2,3,4  
10 ORDER BY 5 desc;
```

Query Results						
product_id	model_name	style	color	Number of Purchases	Total Sales	price
3	Dawes	Men's Styles	Driftwood Fade	63	9450	150
10	Eugene Narrow	Women's Styles	Rosewood Tortoise	62	5890	95
9	Eugene Narrow	Women's Styles	Rose Crystal	54	5130	95
1	Brady	Men's Styles	Layered Tortoise Matte	52	4940	95
6	Olive	Women's Styles	Pearled Tortoise	50	4750	95
4	Dawes	Men's Styles	Jet Black	44	6600	150
7	Lucy	Women's Styles	Elderflower Crystal	44	6600	150
2	Brady	Men's Styles	Sea Glass Gray	43	4085	95
8	Lucy	Women's Styles	Jet Black	42	6300	150
5	Monocle	Men's Styles	Endangered Tortoise	41	2050	50

- Top 5 results for most common types of purchase (highlighted in red)

## 2. Home try-on funnel

### *Additional Insights*

```
1 SELECT style,
2     count(*) AS 'Number of Purchases',
3     SUM (price) AS 'Total Sales',
4     SUM (price) / count(*) AS 'Average
   Price'
5 FROM purchase
6 GROUP BY 1
7 ORDER BY 3 desc;
```

style	Number of Purchases	Total Sales	Average Price
Women's Styles	252	28670	113
Men's Styles	243	27125	111

- Women as a group top Warby Parker purchases over the men group. This result is consistent with number of responses received from the quiz (see below table).
- This can signal to the company that their power user is women in both online research and purchasing habits.

```
SELECT style,
  count (*) AS count
FROM quiz
GROUP BY style
ORDER BY 2 desc;
```

Query Results	
style	count
Women's Styles	469
Men's Styles	432
I'm not sure. Let's skip it.	99