



Usage Funnels with Warby Parker

Learn SQL from Scratch

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WARBY PARKER

Question 1 and 2

Question 1:

The table survey has three columns: question, user_id, and response.
A screenshot of the results can be seen below:

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

Question 2:

The number of responses for each question can be seen in the table below:

question	responses
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

```
/*Returns the first 10 rows of the survey table*/
SELECT *
FROM survey
LIMIT 10;
```

```
/*Returns the number of users who responded to each
question*/
SELECT question,
COUNT(user_id) as 'responses'
FROM survey
GROUP BY 1
ORDER BY 1;
```

Question 3

Question 3:

When was your last eye exam had the lowest completion rate. This is most likely due to the fact that it is the most difficult question to answer. Unlike the other questions, question 5 requires the responder to think back and remember the last time that they had their eyes examined. The other questions were easier to answer and required less thought. It also does not help that this is the last question in the survey. Responders could have grown tired with the survey by this point. Coupled with the fact that question 5 is more difficult to answer, it is not surprising that this question had the lowest completion rate. My suggestion to improve upon this would be to move this question earlier in the survey, but don't make it the very first question.

Question	Responses	Completion Rate
1. What are you looking for?	500	
2. What's your fit?	475	95.0%
3. Which shapes do you like?	380	80.0%
4. Which colors do you like?	361	95.0%
5. When was your last eye exam?	270	74.8%

Question 4

Question 4:

The column names for each table can be seen below:

quiz: user_id, style, fit, shape, and color

home_try_on: user_id, number_of_pairs, and address

purchase: user_id, product_id, style, model_name, color, price

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-a301-27dd93b12e2	Women's Styles	Narrow	Square	Two-Tone
ce965c4d-7a2b-4db6-9847-601747fa7812	Women's Styles	Wide	Rectangular	Black

user_id	number_of_pairs	address
d8add87-3217-4429-9a01-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-acc6-49a7bb46c586	3 pairs	347 Madison Square N
3bc8f97f-2336-4dab-bd86-e391609dab97	5 pairs	182 Cornelia St

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

```
/*Pulls the first 5 rows from the quiz, home_try_on,
and purchase tables*/
SELECT * FROM quiz
LIMIT 5;
SELECT * FROM home_try_on
LIMIT 5;
SELECT * FROM purchase
LIMIT 5;
```

Question 5

Question 5:

This question asked to combine the quiz, home_try_on, and purchase tables into one table using a Left Join. The results of this new table can be seen below:

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

```
/*Combines quiz, home_try_on, and purchase into new 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 q.user_id = p.user_id
LIMIT 10;
/*For is_home_try_on and is_purchase 1=True 0=False*/
```

Question 6

Question 6:

One obvious incite is that the rate of people who make a purchase after the home try on increases significantly when a person is give 5 pairs to try on rather than 3 pairs. The purchase rate increases from **53%** to **79%**. Using this incite as justification, Warby Parker should start sending 5 pairs for every at home trial.

number_of_pairs	num_quiz	num_home_try	num_purchase	quiz_to_try_on	try_on_to_purchase
Ø	250	0	0	0.0	Ø
3 pairs	379	379	201	1.0	0.53
5 pairs	371	371	294	1.0	0.79

```
With funnels 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 q.user_id = p.user_id)

SELECT number_of_pairs,
COUNT(*) AS 'num_quiz',
SUM(is_home_try_on) AS 'num_home_try',
SUM(is_purchase) AS 'num_purchase',
ROUND(1.0 * SUM(is_home_try_on) / COUNT(user_id),2) AS
'quiz_to_try_on',
ROUND(1.0 * SUM(is_purchase) / SUM(is_home_try_on),2)
AS 'try_on_to_purchase'
FROM funnels
GROUP BY 1
ORDER BY 1;
```

Question 6

Question 6:

Women's Styles was the slightly more common result in the style quiz. This is useful information, but we need to take this one step further.

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

We can take it one step farther to see if style had an impact of purchase rate. When it comes to Men's vs Women's Styles, there isn't much difference in their purchase rates. The incite from this would be to target women and men equally since both groups have similar purchase and quiz to home try on rates.

It is also interesting to see the purchase rate for people who skipped the style question. Their purchase rate was 0. It seems as if people who don't answer this question aren't that interested in actually purchasing sunglasses.

style	num_quiz	num_home_try	num_purchase	quiz_to_try_on	try_on_to_purchase
Women's Styles	469	361	252	0.77	0.7
Men's Styles	432	320	243	0.74	0.76
I'm not sure. Let's skip it.	99	69	0	0.7	0.0

```
SELECT style,
COUNT(style) as 'Count'
FROM quiz
GROUP BY 1
ORDER BY 2 DESC;
```

```
With funnels AS(
SELECT DISTINCT q.user_id,
h.user_id IS NOT NULL AS 'is_home_try_on',
h.number_of_pairs,
q.style,
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 q.user_id = p.user_id)
```

```
SELECT style,
COUNT(*) AS 'num_quiz',
SUM(is_home_try_on) AS 'num_home_try',
SUM(is_purchase) AS 'num_purchase',
ROUND(1.0 * SUM(is_home_try_on) / COUNT(user_id),2) AS
'quiz_to_try_on',
ROUND(1.0 * SUM(is_purchase) / SUM(is_home_try_on),2)
AS 'try_on_to_purchase'
FROM funnels
GROUP BY 1
ORDER BY 2 DESC;
```

Question 6

Question 6:

The model that was purchased the most was the Eugene Narrow followed by the Dawes and the Brady.

model_name	number_of _purchases
Eugene Narrow	116
Dawes	107
Brady	95
Lucy	86
Olive	50
Monocle	41

The color that was purchased the most was Jet Black followed by Driftwood Fade and Rosewood Tortoise.

color	number_of _purchases
Jet Black	86
Driftwood Fade	63
Rosewood Tortoise	62
Rose Crystal	54
Layered Tortoise Matte	52
Pearled Tortoise	50
Elderflower Crystal	44
Sea Glass Gray	43
Endangered Tortoise	41

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

SELECT color,
COUNT(color) AS 'number_of _purchases'
FROM purchase
GROUP BY 1
ORDER BY 2 DESC;
```


Question 6

Question 6:

The price point that lead to the most amount of purchases was \$95. This price point lead to significantly more purchases than the higher and lower price point. This seems to suggest that consumers don't want the cheapest option, but also do not want to break the bank on the most expensive option.

price	number_of_purchases
95	261
150	193
50	41

Looking at the purchase results by style, color, and price together, I would suggest that Warby Parker include more Jet Black Eugene Narrow glasses that cost \$95 in their home trials. Although I would note that Price and Style seem to have more of an impact on purchase than Color.

```
SELECT price,
COUNT(price) AS 'number_of_purchases'
FROM purchase
GROUP BY 1
ORDER BY 2 DESC;
```