



Warby Parker

Learn SQL from Scratch

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STYLE QUIZ FUNNEL



1. SURVEY TABLE: What columns does the table have?

Question
User_id
Response

Query

```
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

2. SURVEY TABLE: What is the number of responses for each question?

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

question	COUNT(DISTINCT user_id)
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

Query

```
SELECT question,  
       COUNT(DISTINCT user_id)  
FROM survey  
GROUP BY question;
```

3. SURVEY TABLE: Analysis

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

Questions toward the end of the quiz have a lower completion rate (54% for Q5 versus 100% for Q1)

2. What do you think is the reason?

Survey takers may answer initial questions but fall off toward the end of the survey. Drop off occurs at the 3rd question.

question	Percent Completing this Question
1. What are you looking for?	100%
2. What's your fit?	95%
3. Which shapes do you like?	76%
4. Which colors do you like?	72%
5. When was your last eye exam?	54%

Query

```
SELECT question,  
       COUNT(DISTINCT user_id)  
FROM survey  
GROUP BY question;
```

HOME TRY ON FUNNEL



4. QUIZ, HOME_TRY_ON, PURCHASE TABLE: What are the column names?

1. Quiz

user_id	style	fit	shape	color
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2. Home_try_on

user_id	number_of_pairs	address
---------	-----------------	---------

3. Purchase

user_id	product_id	style	model_name	color	price
---------	------------	-------	------------	-------	-------

Query

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

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

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


5. LEFT JOIN TABLE: Create a new table with layout specified

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

Query

```
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 q  
LEFT JOIN home_try_on h  
      ON q.user_id = h.user_id  
LEFT JOIN purchase p  
      ON p.user_id = q.user_id  
LIMIT 10;
```

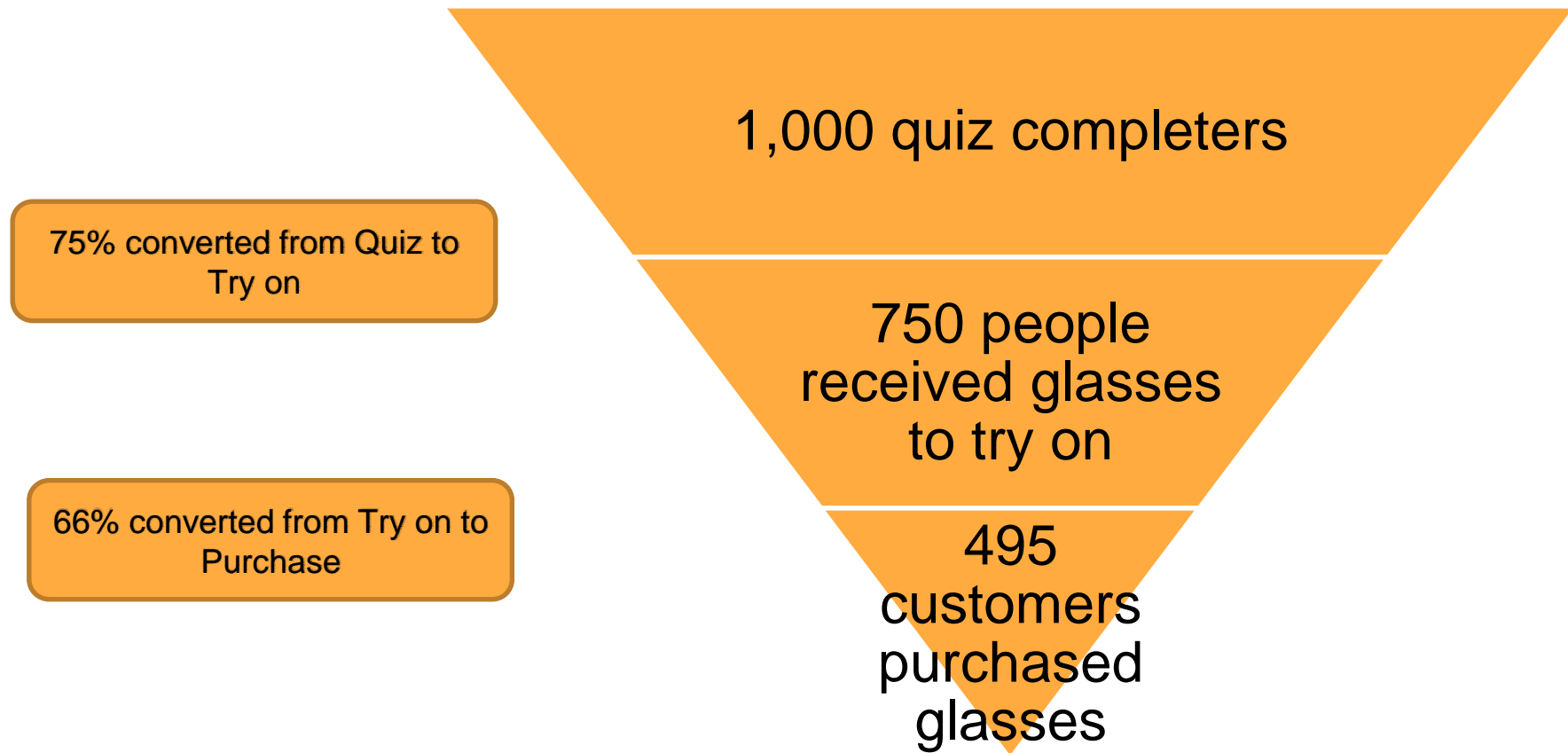
6a. Calculate overall conversion rates by aggregating across all rows.

number_of_pairs	Quiz_Completers	Try_On	Customers_Purchase	Try_On_To_Purchase
	1000	750	495	0.66

Query

```
WITH funnel 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 q
LEFT JOIN home_try_on h
  ON q.user_id = h.user_id
LEFT JOIN purchase p
  ON p.user_id = q.user_id
)
SELECT number_of_pairs,
COUNT(*) AS 'Quiz_Completers',
  SUM(is_home_try_on) AS 'Try_On',
  SUM(is_purchase) AS 'Customers_Purchase',
  1.0 * SUM(is_purchase) /
  SUM(is_home_try_on) AS 'Try_On_To_Purchase'
FROM funnel;
```

6b. Warby Parker Home Try On Funnel



6c. Difference in Purchase Rates Between Customers Who had 3 vs 5 Pairs

number_of_pairs	num_browse	num_try_on	num_purchase	try_on_to_purchase
0	250	0	0	
3 pairs	379	379	201	0.530343007915567
5 pairs	371	371	294	0.792452830188679

79.2% sales conversion offering 5 pairs vs
53% conversion offering 3 pairs

Query

```
WITH funnel 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 q
    LEFT JOIN home_try_on h
        ON q.user_id = h.user_id
    LEFT JOIN purchase p
        ON p.user_id = q.user_id
)
SELECT number_of_pairs,
COUNT(*) AS 'num_browse',
    SUM(is_home_try_on) AS 'num_try_on',
    SUM(is_purchase) AS 'num_purchase',
    1.0 * SUM(is_purchase) /
    SUM(is_home_try_on) AS 'try_on_to_purchase'
FROM funnel
GROUP BY number_of_pairs;
```

6d. The most common purchases made (by model)

style	model_name	color	price	COUNT (user_id)
Women's Styles	Eugene Narrow	Rosewood Tortoise	95	116
Men's Styles		Driftwood Fade	150	107
Men's Styles	Brady	Sea Glass Gray	95	95
Women's Styles	Lucy	Elderflower Crystal	150	86
Women's Styles	Olive	Pearled Tortoise	95	50
Men's Styles	Monocle	Endangered Tortoise	50	41

Query

```
SELECT *,  
COUNT (user_id)  
FROM purchase  
GROUP BY model_name  
ORDER BY COUNT(user_id) DESC;
```

6e. The most common purchases made (by women's vs men's style)

style	model_name	color	price	COUNT (user_id)
Women's Styles	Eugene Narrow	Rosewood Tortoise	95	252
Men's Styles	Brady	Sea Glass Gray	95	243

Query

```
SELECT *,
COUNT (user_id)
FROM purchase
GROUP BY style
ORDER BY COUNT(user_id) DESC;
```

6e. The most common results of the style quiz (highlighted)

question	response	COUNT (DISTINCT user_id)
1. What are you looking for?	I'm not sure. Let's skip it.	92
1. What are you looking for?	Men's Styles	242
1. What are you looking for?	Women's Styles	209
2. What's your fit?	Medium	132
2. What's your fit?	Narrow	208
2. What's your fit?	Wide	88
3. Which shapes do you like?	No Preference	29
3. Which shapes do you like?	Rectangular	141
3. Which shapes do you like?	Round	91
3. Which shapes do you like?	Square	119
4. Which colors do you like?	Black	112
4. Which colors do you like?	Crystal	69
4. Which colors do you like?	Neutral	36
4. Which colors do you like?	Tortoise	117
4. Which colors do you like?	Two-Tone	27
5. When was your last eye exam?	1-3 Years	56
5. When was your last eye exam?	3+ Years	37
5. When was your last eye exam?	<1 Year	141
5. When was your last eye exam?	Not Sure. Let's Skip It	36

Query

```
SELECT question, response,  
COUNT (DISTINCT user_id)  
FROM survey  
GROUP BY response  
ORDER BY question;
```

Actionable Insights for Warby Parker



Insights:

- Shorten survey or prioritize questions in the survey quiz toward the beginning of the survey based on drop off rate
- Offer 5 pairs of glasses for the home trial as this results in a higher try on to purchase rate.
- Based on survey response, continue to offer men's styles, narrow fit, rectangular shapes, and tortoise colors.
- Based on purchase data, continue to offer Eugene Narrow and Rosewood Tortoise.