```
df
                 group_by(cat2) |> summarize(...)
        |>
cat1 cat2 x
                  cat1 cat2
                   a
 a
                   a
 a
                                    cat2 avg total n
                                       4.4 22 5
 a
                   b
                   a
                                    cat2 avg total n
                   b
                                      k 5.75 23 4
```

```
df |>
  group_by(cat2) |>
  summarize(
   avg = mean(x),
   total = sum(x),
   n = n()
)
```

```
cat2 avg total n

j 4.4 22 5

k 5.75 23 4
```