

df |>

cat1	cat2	x
a	j	1
a	j	2
a	k	3
b	j	4
b	k	5
b	k	6
c	j	7
c	j	8
c	k	9

group_by(cat1) |>

cat1	cat2	x
a	j	1
a	j	2
a	k	3
b	j	4
b	k	5
b	k	6
c	j	7
c	j	8
c	k	9

summarize(...)

cat1	avg	total	n
a	2	6	3
b	5	15	3
c	8	24	3

```
df |>
  group_by(cat1) |>
  summarize(
    avg = mean(x),
    total = sum(x),
    n = n()
  )
```

cat1	avg	total	n
a	2	6	3
b	5	15	3
c	8	24	3