

## 1 | Crosstabulations – Calculations by Hand

Expected Values:

Department	Mode of Transport			Total
	Bike	Bus	Car	
PAIS	7.2	6.8	6	20
CIM	10.8	10.2	9	30
Total	18	17	15	50

- Calculate the  $\chi^2$ -value
  - **(2.8867)**
- How many degrees of freedom does this table have? Why?
  - **(2)**
- Using the  $\chi^2$  Table, what is the p-value?
  - **(0.236, or between 0.250 and 0.100)**
- Are mode of transport and departmental association independent in the population?
  - **(Yes)**

## 2 | Applied Exercises in R (Core & Going Further)

See RScript in the [Online Companion](#)