# DATA TRANSFORMATIONS

# ARITHMETIC OPERATIONS

# EXTRACTING ELEMENTS

# PUTTING DATASETS TOGETHER

CONCATENATION

# MERGING

# TIDY DATA

# TIDY PRINCIPLES

▸ Each row is an observation

▸ Each column is a variable

▸ Each type of observational unit forms a table

# RESHAPING DATASETS

# DATA AGGREGATION

# SPLIT-APPLY-COMBINE