

# 02: PERMUTATION TESTS

Reference: MSwRR Ch 3

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## 1 Example: Motivation Experiment



Treatment	min	Q1	median	Q3	max	mean	sd	n	missing
Extrinsic	5	12.2	17.2	19.0	24.0	15.7	5.3	23	0
Intrinsic	12	17.4	20.4	22.3	29.7	19.9	4.4	24	0

## 2 Logic of Hypothesis Testing

1. Formulate two competing \_\_\_\_\_ about the \_\_\_\_\_
2. Calculate a \_\_\_\_\_ summarizing the relevant information to the claims
3. Look at the \_\_\_\_\_ assuming that the initial claim is true
4. \_\_\_\_\_ the observed test statistic to the expected behavior (the distribution created in step 3).

**Example:** Write down the competing hypotheses being tested by the researchers, both in words and using proper notation.

## P-value

### Distribution of difference in means

Assuming equal means, based on 1,999 trials



## 3 R Code

Use this space to jot down any notes about the R code we talked through