This reference cards provides you with the recipes for the randomization tests and bootstrap confidence intervals that are used in Math 107. You will need to carefully consider what ingredients need to be changed for each recipe. I have outlined the ingredients that will need to be changed below. Remember that all of the recipes rely on the `mosaic` package being loaded in your R session.

# Randomization Tests

## One proportion

Change `n` and `prob` to match the problem.

```
null_dsn <- do(1000) * rflip(n, prob = 0.5)
```

## Two proportions

Change `responsevar`, `"level"`, `groupvar`, and `data_set` to match the problem.

```
null_dsn <- do(1000) *
  diffmean(responsevar == "level" ~ shuffle(groupvar), data = data_set)
```

## Two means

Change `responsevar`, `groupvar`, and `data_set` to match the problem.

```
null_dsn <- do(1000) *
  diffmean(responsevar ~ shuffle(groupvar), data = data_set)
```

## Calculating p-values

Change `colname` and `observed` to match the problem.

```
prop(~colname >= observed, data = null_dsn) # upper tail
prop(~colname <= observed, data = null_dsn) # lower tail
```

# Bootstrap Confidence Intervals

## One mean

Change `variable` and `data_set` to match the problem.

```
boot_dsn <- do(1000) * mean(~variable, data = resample(data_set))
```

## Two means

Change `responsevar`, `groupvar`, and `data_set` to match the problem.

```
boot_dsn <- do(1000) * diffmean(responsevar ~ groupvar, data = resample(data_set))
```

## One proportion

Change `responsevar`, `"level"`, and `data_set` to match the problem.

```
boot_dsn <- do(1000) * prop(~variable == "level", data = resample(data_set))
```

## Two proportions

Change `responsevar`, `"level"`, `groupvar`, and `data_set` to match the problem.

```
boot_dsn <- do(1000) *
  diffmean(responsevar == "level" ~ groupvar, data = resample(data_set))
```

## Standard Error

Change `colname` to match the problem.

```
se <- sd(~colname, data = boot_dsn)
```