5. **[1 point] Extend the above code to also summarize the median. Call the median summary `median_GDP`. Assign this summary to `GDP_summary` (it will overwrite the previous version):**

```
GDP_summary <- "<<<<YOUR CODE HERE>>>>"
GDP_summary
```

```
## [1] "<<<<YOUR CODE HERE>>>>"
```

```
check_problem5()
```

```
## [1] "Checkpoint 1 Error: FAILED"
##
## Problem 5
## Checkpoints Passed: 0
## Checkpoints Errored: 1
## 0% passed
## --------
## Test: FAILED
```

Measures of variation

12. [2 marks] Use **ggplot2** to make a boxplot of the distribution of `CS_rate_100`

```
p12 <- "<<<<YOUR CODE HERE>>>>"
p12
```

```
## [1] "<<<<YOUR CODE HERE>>>>"
```

```
check_problem12()
```

```
## [1] "Checkpoint 1 Error: You did not define a ggplot."
## [1] "Checkpoint 2 Error: FAILED"
## [1] "Checkpoint 3 Error: FAILED"
##
## Problem 12
## Checkpoints Passed: 0
## Checkpoints Errored: 3
## 0% passed
## --------
## Test: FAILED
```

Recall that the box plot summarizes the distribution in five numbers: the minimum, the first quartile (with 25% of the data below it), the median, the third quartile (with 75% of the data below it), and the maximum. Each of these numbers has at least one corresponding R function:

Number	R function
Minimum	`min(variable)`
First quartile	`quantile(variable, probs = 0.25)`
Median	`median(variable)` or `quantile(variable, probs = 0.5)`
Third quartile	`quantile(variable, probs = 0.75)`
Maximum	`max(variable)`

13. **[2 points] Use a combination of `dplyr`'s `summarize` function and the above functions to compute the five number summary of `CS_rate_100`. Assign the summary to the name `five_num_summary`, which should contain values for `min`, `Q1`, `median`, `Q3`, and `max`.**

```
five_num_summary <- "<<<<YOUR CODE HERE>>>>"
five_num_summary
```

```
## [1] "<<<<YOUR CODE HERE>>>>"
```

```
check_problem13()
```

```
## [1] "Checkpoint 1 Error: FAILED"
## [1] "Checkpoint 2 Error: FAILED"
## [1] "Checkpoint 3 Error: FAILED"
## [1] "Checkpoint 4 Error: FAILED"
## [1] "Checkpoint 5 Error: FAILED"
##
## Problem 13
## Checkpoints Passed: 0
## Checkpoints Errored: 5
## 0% passed
## --------
## Test: FAILED
```