

GPA and study hours

The columns represent the variables `gpa` and `study_hours` for a sample of 193 undergraduate students who took an introductory statistics course in 2012 at a private US university.

```
library(tidyverse)
library(openintro)
gpa_study_hours |>
  summarize(
    num_students = n(),
    mean_hours = mean(study_hours),
    sd_hours = sd(study_hours)
  )
```

```
# A tibble: 1 x 3
  num_students mean_hours sd_hours
  <int>         <dbl>   <dbl>
1         193         17.5    11.4
```

1. Compute the standard error of the mean.
2. Find the appropriate critical value in the appropriate t -distribution for a 90% confidence interval. Use the `qt()` function in R and draw a picture!
3. Write down the margin of error
4. Write down the confidence interval.