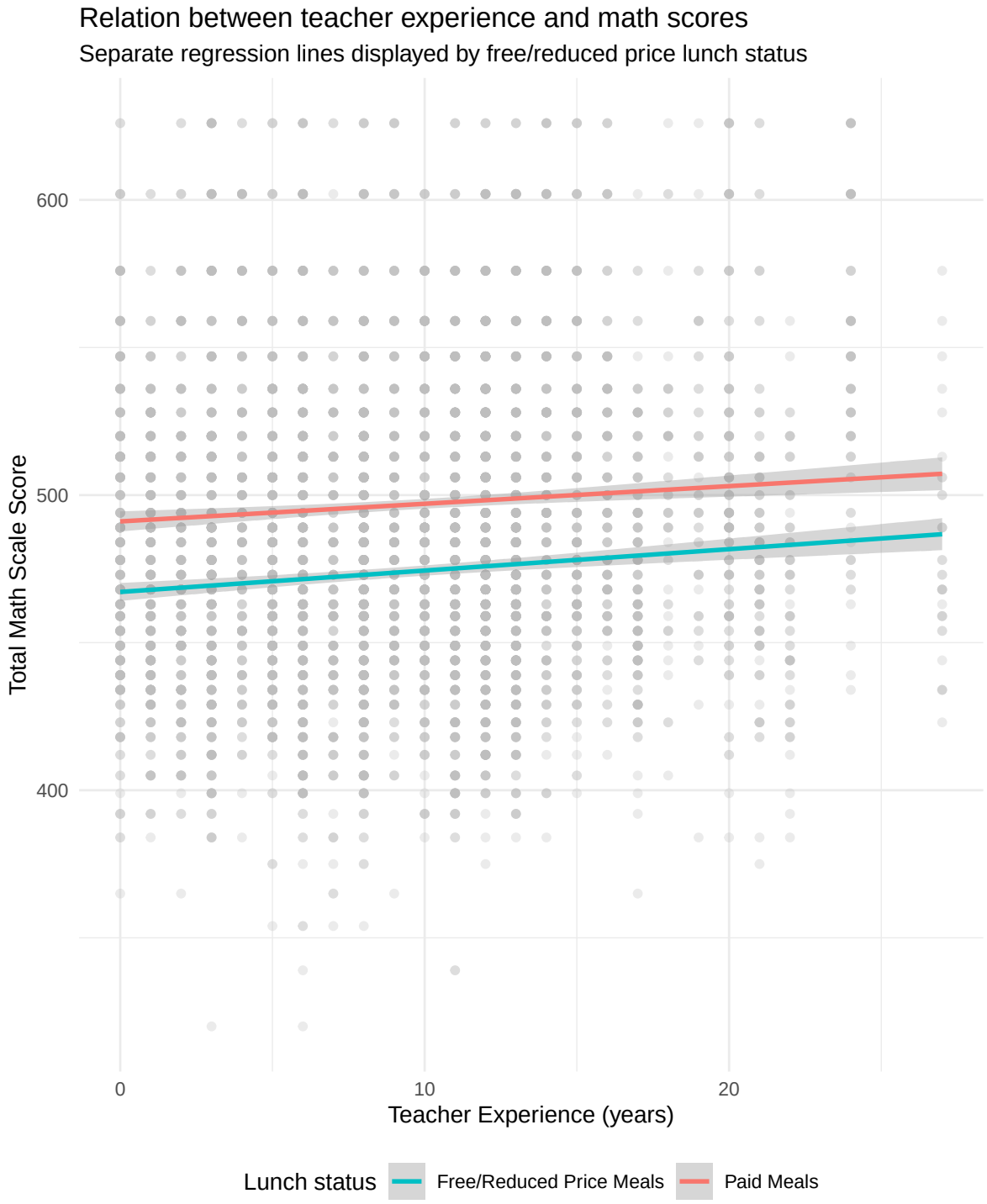
hw_6

```
# A tibble: 4 x 6
  sex   frl   math_mean math_sd rdg_mean rdg_sd
  <fct> <fct>     <dbl>   <dbl>    <dbl>  <dbl>
1 boy   no         493.    46.3     441.   32.3
2 boy   yes        470.    46.1     425.   26.6
3 girl  no         501.    46.0     449.   34.5
4 girl  yes        478.    46.3     431.   27.4
```

The table presents average math and reading scores, along with standard deviations, for students grouped by gender (boys and girls) and free reduced lunch (FRL) status. Boys without FRL had a math mean of 493 and reading mean of 441, while boys with FRL scored lower on average in both subjects (470 in math and 425 in reading). Similarly, girls without FRL scored higher (501 in math and 449 in reading) compared to girls with FRL, who had averages of 478 in math and 431 in reading. This data highlights performance differences associated with gender and FRL status.



This plot shows the relationship between years of teacher experience and students' math scores,

with separate linear regression lines for students based on lunch status ("Free/Reduced Price Meals" vs. "Paid Meals"). The lines indicate that students with "Paid Meals" tend to have higher math scores on average, compared to those with "Free/Reduced Price Meals" across different levels of teacher experience.

For homework6, program R created by R Core Team (2024) is used for data analysis. Then R packages such as tidyverse (Wickham et al. 2019), here (Müller 2020), and rio (Chan et al. 2023) are applied.

References

Chan, Chung-hong, Thomas J. Leeper, Jason Becker, and David Schoch. 2023. *Rio: A Swiss-Army Knife for Data File i/o*. https://cran.r-project.org/package=rio.

Müller, Kirill. 2020. *Here: A Simpler Way to Find Your Files*. https://CRAN.R-project.org/package=here.

R Core Team. 2024. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the tidyverse." *Journal of Open Source Software* 4 (43): 1686. https://doi.org/10.21105/joss.01686.