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Problem 1

(a) Here, I categorize Wellbeing variable by rounding. (반올림으로 category 3, 4, 5,...로 만듦) and conduct One-way ANOVA.

```
> summary(an)
```

```
Df Sum Sq Mean Sq F value Pr(>F)
round_wb 5 1851 370.3 8.868 2.7e-07 ***
Residuals 134 5595 41.8
---
Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
```

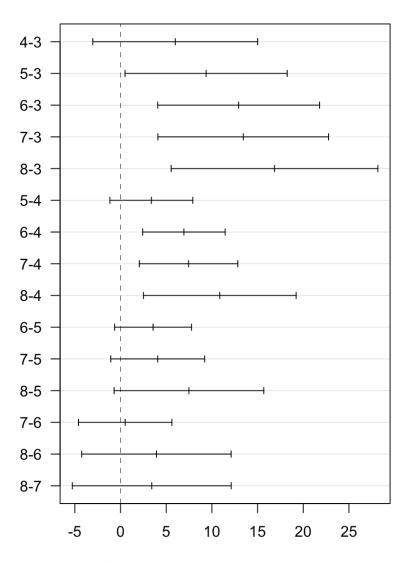
- (b) Tukey HSD test of (a).
- > (tkh = TukeyHSD(an, conf.level = 0.95))
 Tukey multiple comparisons of means
 95% family-wise confidence level

Fit: aov(formula = HPI ~ round_wb, data = HD)

\$round_wb

```
diff
                    lwr
                                      p adj
                              upr
4-3 5.990000 -3.0351744 15.015174 0.3951971
5-3 9.366154 0.4909928 18.241315 0.0321313
6-3 12.927500 4.0649547 21.790045 0.0006337
7-3 13.435000 4.0930570 22.776943 0.0007946
8-3 16.853333 5.5396785 28.166988 0.0004483
5-4 3.376154 -1.1611600 7.913468 0.2677547
6-4 6.937500 2.4249128 11.450087 0.0002602
7-4 7.445000 2.0514267 12.838573 0.0014816
8-4 10.863333 2.5076455 19.219021 0.0033959
6-5 3.561346 -0.6431935 7.765886 0.1472114
7-5 4.068846 -1.0697669 9.207459 0.2056595
8-5 7.487179 -0.7062466 15.680606 0.0943780
7-6 0.507500 -4.6092929 5.624293 0.9997337
8-6 3.925833 -4.2539256 12.105592 0.7343394
8-7 3.418333 -5.2785423 12.115209 0.8652896
```

95% family-wise confidence level



Differences in mean levels of round_wb