I love math but does she love me?
The analysis of PISA 2012 dataset.

Michał Futrega and Łukasz Rajkowski

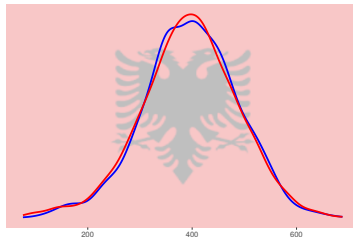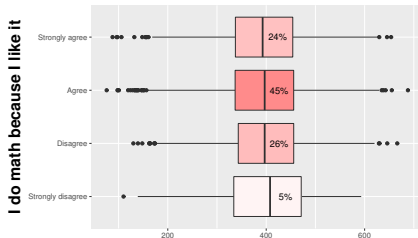Faculty of Mathematics, University of Warsaw

November 10, 2017

We observed that countries where the affection to mathematics goes hand in hand with test results is ranked higher than country where there is no such correlation.

List of countries

1. Albania
2. Argentina
3. Australia
4. Austria
5. Belgium
6. Brazil
7. Bulgaria
8. Canada
9. Chile
10. China-Shanghai
11. Chinese Taipei
12. Colombia
13. Costa Rica
14. Croatia
15. Czech Republic
16. Denmark
17. Estonia
18. Finland
19. France
20. Germany
21. Greece
22. Hong Kong-China
23. Hungary
24. Iceland
25. Indonesia
26. Ireland
27. Israel
28. Italy
29. Japan
30. Jordan
31. Kazakhstan
32. Korea
33. Latvia
34. Liechtenstein
35. Lithuania
36. Luxembourg
37. Macao-China
38. Malaysia
39. Mexico
40. Montenegro
41. Netherlands
42. New Zealand
43. Norway
44. Perm(Russian Federation)
45. Peru
46. Poland
47. Portugal
48. Qatar
49. Romania
50. Russian Federation
51. Serbia
52. Singapore
53. Slovak Republic
54. Slovenia
55. Spain
56. Sweden
57. Switzerland
58. Thailand
59. Tunisia
60. Turkey
61. United Arab Emirates
62. United Kingdom
63. United States of America
64. Uruguay
65. Vietnam

Albania

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/b22043c6b905a5c90cd4e423bdcf4c11")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

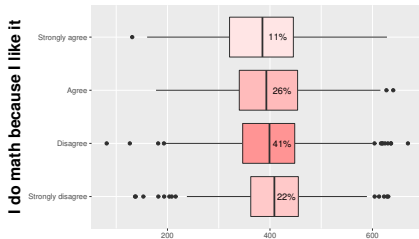`aread("LRajkowski/pisa/12b45a31bcd8816e9ef96a91c82bcf4c")`
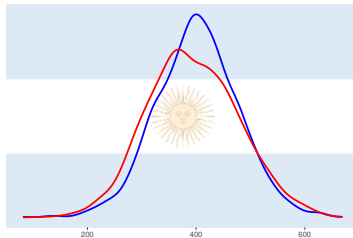

Albania mean score is **58** out of 65 countries

`aread("LRajkowski/pisa/9b2abf709f330722d9cf30adfa4f0da1")`

Argentina

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/2abba7d8c78e47fb0382709dc17ece2b")
```


Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/e7fee9010db7f0949ba7cca3418e238d")
```
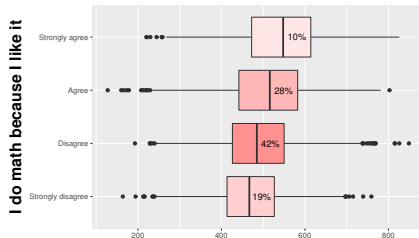

Argentina mean score is **57** out of 65 countries

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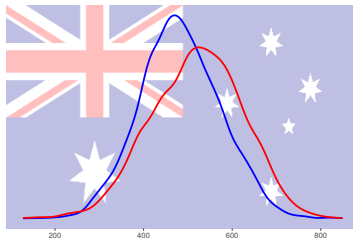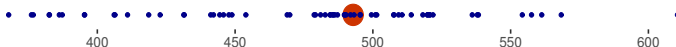
Australia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/3b169564db2606226357a922a89d3097")
```


Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/e626167841e44be4f6a5290fabb23a50")
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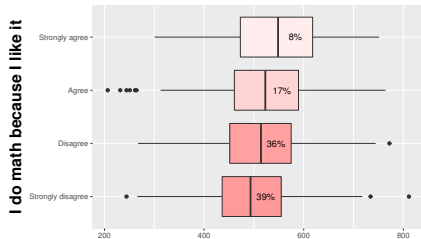

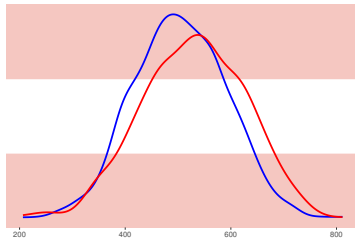Australia mean score is **26** out of 65 countries

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aread("LRajkowski/pisa/e21731ab17f8e53645a2beca76151a8a")
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Austria

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/1cf13a29ffbca2ef64e5005199b9dee9")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/b1edc2ef8a0bfa1c81f51accdd73cf69")`

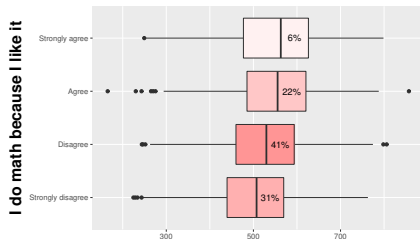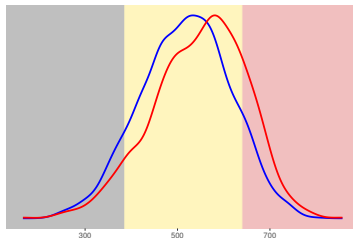Austria mean score is **18** out of 65 countries

`aread("LRajkowski/pisa/f6a58903ef86da0c8bbde00dadfa40e8")`

Belgium

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/07632400f5dcef989a0492d90be0d196")
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Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/a79db3700a2221b17564ccfce732940a")
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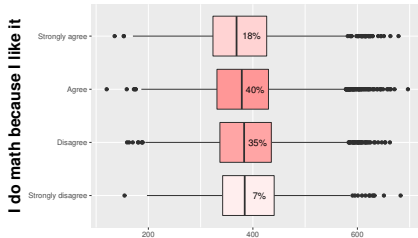

Belgium mean score is **12** out of 65 countries

```
aread("LRajkowski/pisa/6a199e925e1a43c075ee799090b57d8e")
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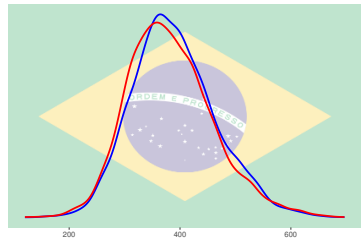
Brazil

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/06fbe994b1b39829caaeb97389306376")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/448f58d7242b3b2d6283bcc97ee90004")`

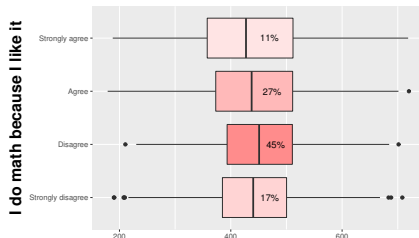Brazil mean score is **62** out of 65 countries

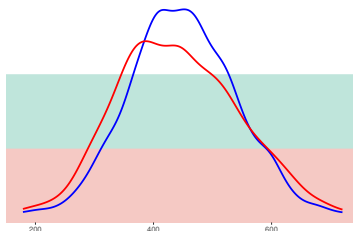`aread("LRajkowski/pisa/d9253ddb47ab550f0e7b24823a77624d")`

Bulgaria

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/33d683b74a7e43321ab602f5c552e00a")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/6925dc48d6938c4e18de333fb2c5b10b")`

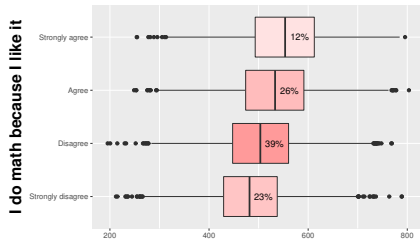Bulgaria mean score is **48** out of 65 countries

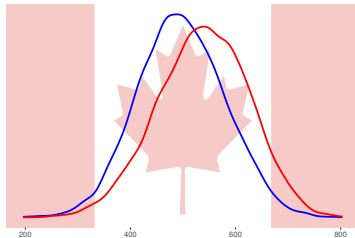`aread("LRajkowski/pisa/851dc803700a5ad7d0a88957dce56fca")`

Canada

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/0116fddf448fa3604364ce080fd37e7a")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/4bf4e055fb1858d2a556feee84fec4ea")`

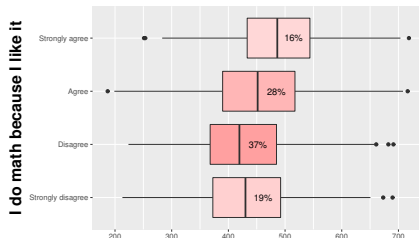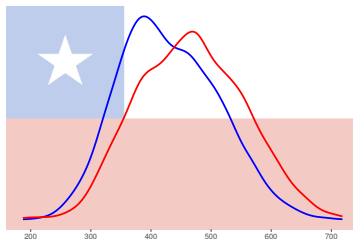Canada mean score is **17** out of 65 countries

`aread("LRajkowski/pisa/2573bf1cd544aaaa85b2f916f66fa4de")`

Chile

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/a6680b175b35bd853739266886989cb2")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/b8ba3c320d0dd2bbc42bfbeec22f10ef")`

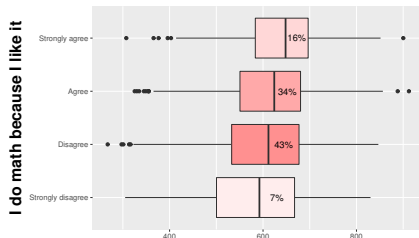Chile mean score is **47** out of 65 countries

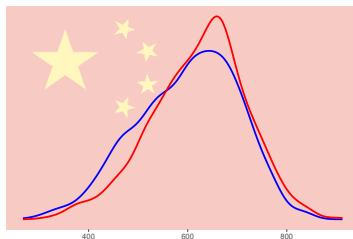`aread("LRajkowski/pisa/32cc197b7647c336e7f18012a9c97ea8")`

China-Shanghai

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/d7382c416028fe5acd33096bfe4479b8")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

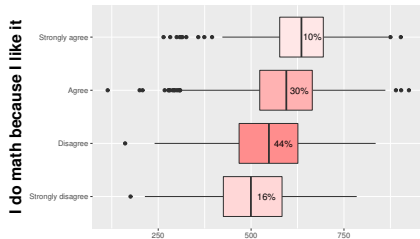`aread("LRajkowski/pisa/3f489127d3f9191d132a0713f719b590")`

China-Shanghai mean score is **1** out of 65 countries
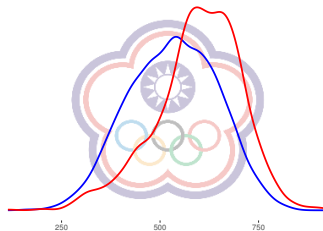
`aread("LRajkowski/pisa/6473b8b25ac9067b575238daf8cbf5a6")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/7eae4f0f190de2e246a70554ce47666b")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

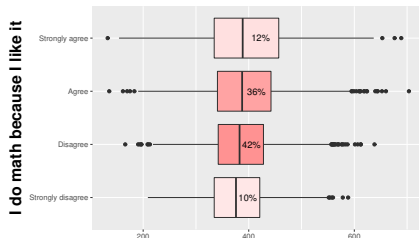`aread("LRajkowski/pisa/cab8483629d7f29c2871514d3132fcc2")`

Chinese Taipei mean score is **4** out of 65 countries

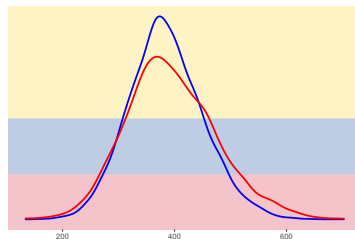`aread("LRajkowski/pisa/7e8ab4545aa40738fb578b62f3f94424")`

Colombia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/38e272fa12fce96f4acdc9a7f80ae2ab")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/3e0d2df8e018916a0df75788b8f45807")`

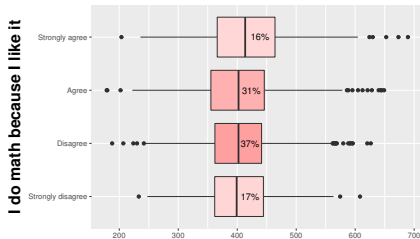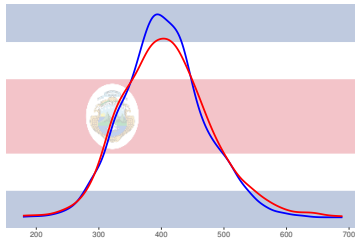Colombia mean score is **60** out of 65 countries

`aread("LRajkowski/pisa/0091a84f8fe07c7477d8fdc51796fbc3")`

Costa Rica

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/a3b3344f1d02c7eb3b6bcc4d59f73eea")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

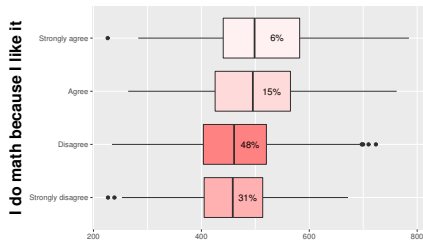`aread("LRajkowski/pisa/b197d549229a90f5d980d977d0a13204")`
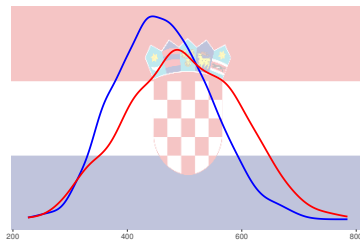

Costa Rica mean score is **56** out of 65 countries

`aread("LRajkowski/pisa/3ae781b856cb6e4522a99ee89ea2b110")`

Croatia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/3ed11151bc2223f743cba52a1252f22f")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/7659f04ccb1cc8c66a88d00189da89ad")`

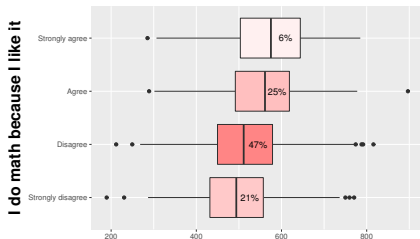Croatia mean score is **41** out of 65 countries

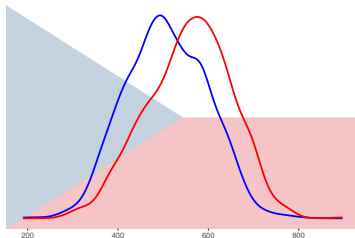`aread("LRajkowski/pisa/9656a69c5fbe5960cbbb4744a68f68a9")`

Czech Republic

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/c102a18cc76e8c799cd3779efb31594d")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

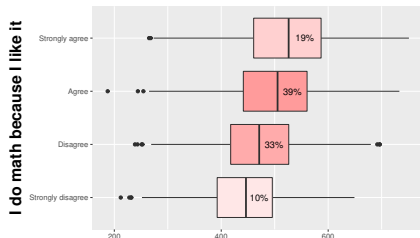aread("LRajkowski/pisa/148c63979b3760afc123aee9f7390070")

Czech Republic mean score is **13** out of 65 countries
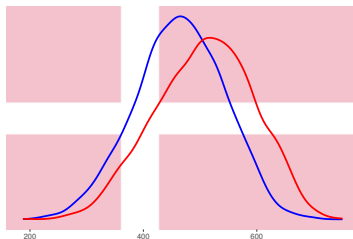
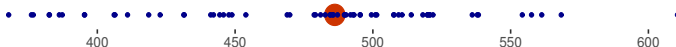aread("LRajkowski/pisa/8c77949f442675f524077e6a18a06946")

Denmark

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/7dabee387e63acfdd9e47d00046f4716")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/8f61186df853500d45ca6062341de04a")`

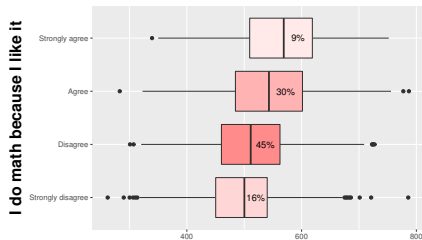Denmark mean score is **32** out of 65 countries

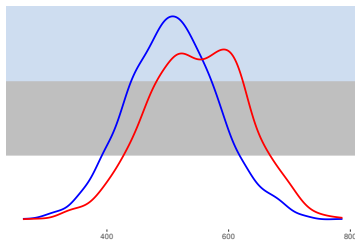`aread("LRajkowski/pisa/63ec260ebfc61c46305177309e8e8318")`

Estonia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/12535ff2d2d9c0bab2b8c8d62dd7393c")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

aread("LRajkowski/pisa/e2e4c21dc9e4c58512c7c5f82d06e12b")

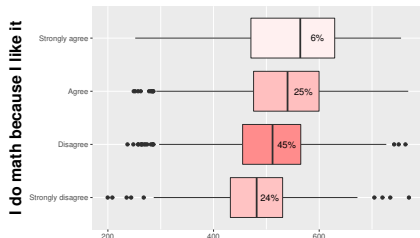Estonia mean score is **9** out of 65 countries

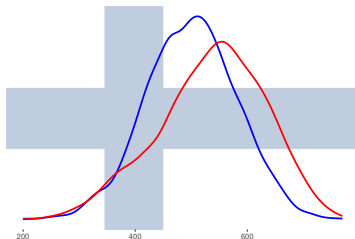aread("LRajkowski/pisa/795ff68d3b2f6734ef5b12ebb6dd28c7")

Finland

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/8d2fff0f36fd77e1ed8ab46aba629cdc")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/6aea041771228a363008b33f40bb7af2")`

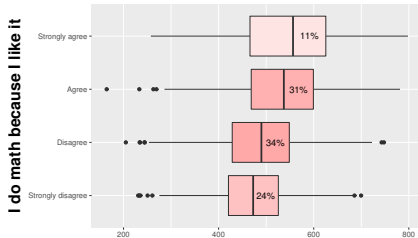Finland mean score is **19** out of 65 countries

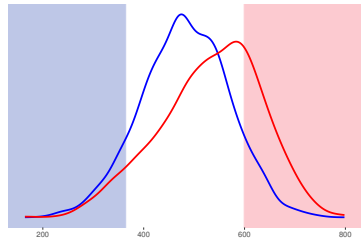`aread("LRajkowski/pisa/00f999ffbb6453413de7280715c09fca")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/bbeb86f23934d8355e799c401809efe1")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

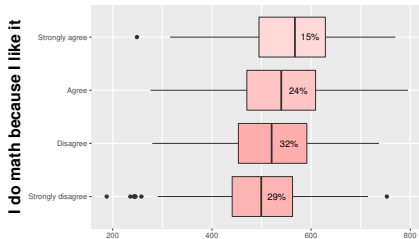`aread("LRajkowski/pisa/a49901f646847d76cba0a6cf75f5f02b")`

France mean score is **22** out of 65 countries

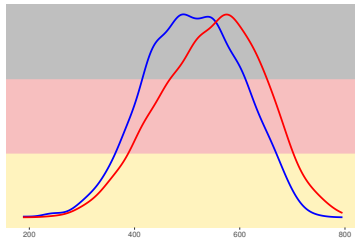`aread("LRajkowski/pisa/195d5e10d6574937cd0f490cc5b09047")`

Germany

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/d0b2d827d38a1ffa1a49026eee3f7513")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/815be0c5f0906ae99feaf7b87eed0aea")`

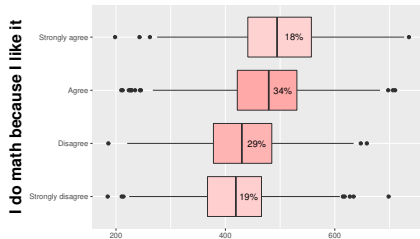Germany mean score is **15** out of 65 countries

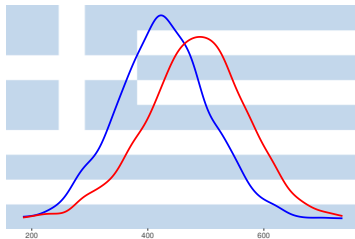`aread("LRajkowski/pisa/2e477cb809aa70dcf09825a708cd5954")`

Greece

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/fe66de83b37af33f7fe237a9221b6f71")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/8c6cd08a59aab91cc873eb408906ea00")`

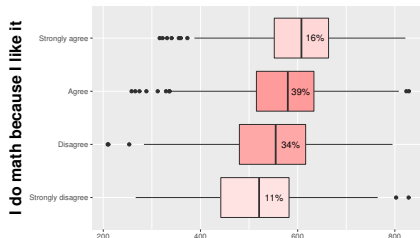Greece mean score is **43** out of 65 countries

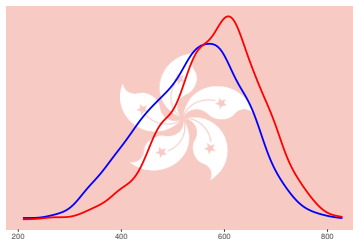`aread("LRajkowski/pisa/2ac1b30d24fc9279797a76463c4b7a93")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

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aread("LRajkowski/pisa/2e8c0fdf9dc7b9bbb483e5c21aef20ff")
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Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

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aread("LRajkowski/pisa/8ca8ae085a1bfd7229b1b1153cafba58")
```
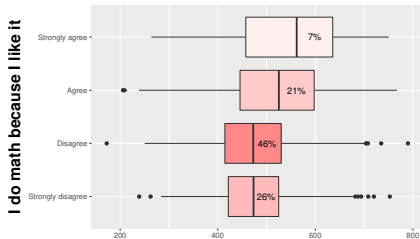

Hong Kong-China mean score is **3** out of 65 countries

```
aread("LRajkowski/pisa/ffb0267f0c7bdb1d79361cd84539d917")
```
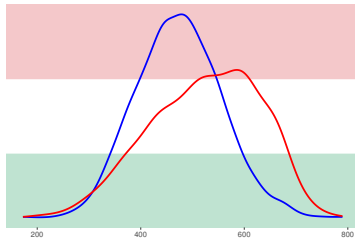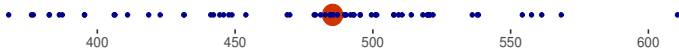
Hungary

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/7e8eac4b4de3636e3564dc3678bce800")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/197b3b471149c2389a81a3150b346fe4")`

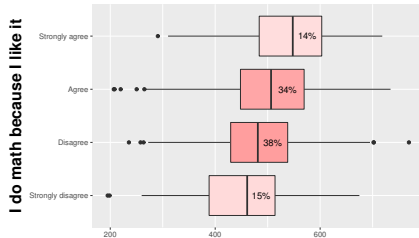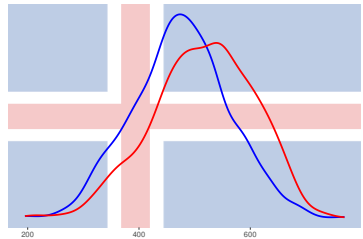Hungary mean score is **34** out of 65 countries

`aread("LRajkowski/pisa/801b0121ed1a86ddab3e381386934382")`

Iceland

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/f5c90f4f33cec648e2ac90de69245c39")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/24deff4f64fd840a9a8bf57f62cc4133")`

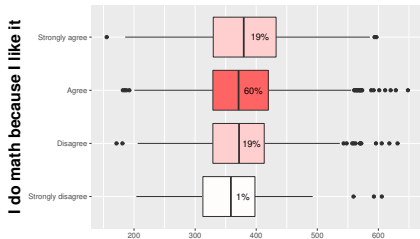Iceland mean score is **25** out of 65 countries

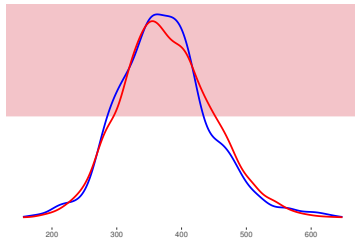`aread("LRajkowski/pisa/088186f16eb473eff7279b5defd49b41")`

Indonesia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/03cdfaaea0443b6d90c8a83f9441b6bc")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

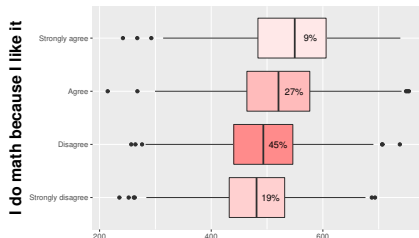`aread("LRajkowski/pisa/803571956275b5a0dfb89e4399ca14e5")`
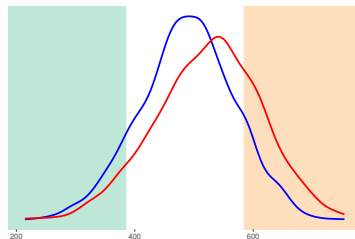

Indonesia mean score is **64** out of 65 countries

`aread("LRajkowski/pisa/30a377fd918a35c60895e0138e5f6d58")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/c1e6015fd7a7e79da406189a33bc5411")
```

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/b188eb91fde24c3abb7797329e6a3af1")
```
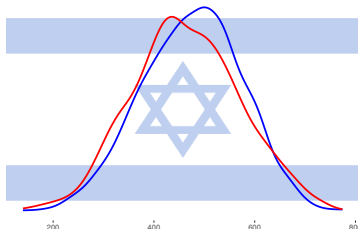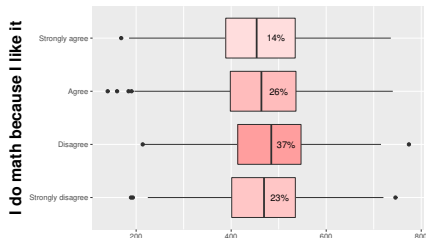

Ireland mean score is **21** out of 65 countries

```
aread("LRajkowski/pisa/2de50454734a5ea4efe16f17dbde6739")
```

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/2c32e4bee3eaf772c02d297d84f4db46")
```

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/309749001394bf7c6fa76a3200a1e91c")
```


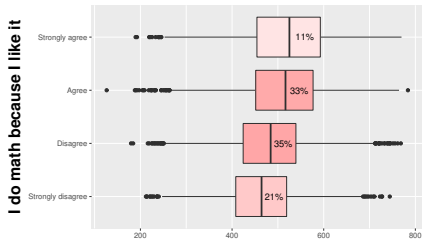Israel mean score is **42** out of 65 countries
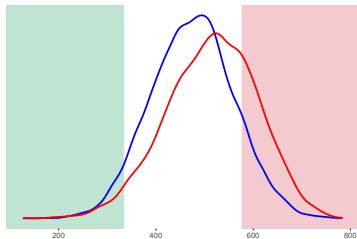
```
aread("LRajkowski/pisa/c601a751a515a116e707be2fd1cdd1fd")
```
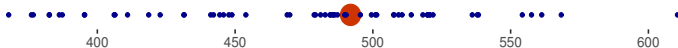
Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/1732f46f721ae63984917a1bb6470164")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

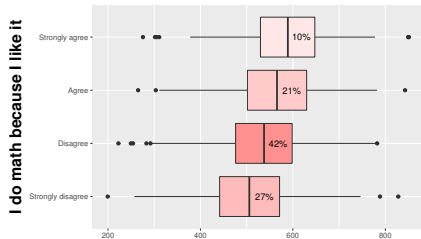aread("LRajkowski/pisa/59e98a852a01397c4caa3058004fa3b8")

Italy mean score is **27** out of 65 countries

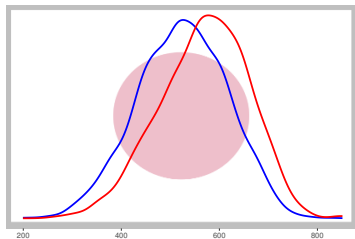aread("LRajkowski/pisa/18477bfaec6ae63eeecb98bdb080d360")

▸ Table of contests

Japan

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/caed2b942399536bdf2fab7a683421af")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/8735edb3002a960ae669cedaf801d443")`

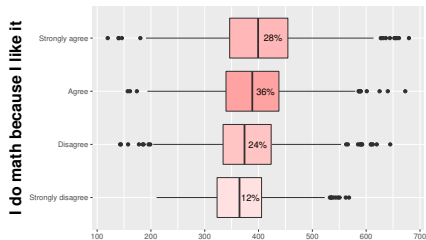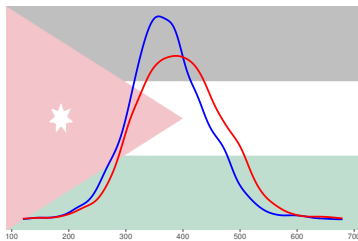Japan mean score is **8** out of 65 countries

`aread("LRajkowski/pisa/4a580ee74f0c8e598275f167449071c7")`

Jordan

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/989a64cc15c52bf5dba5d9b50958dcc2")
```


Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/e7c222a8ed71bee6350c9707dec2a2d7")
```
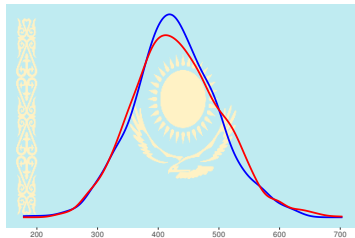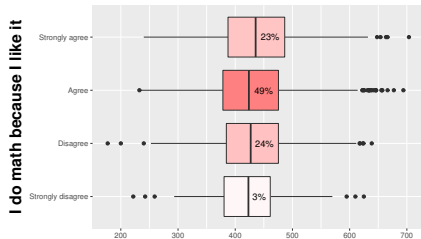

Jordan mean score is **61** out of 65 countries

```
aread("LRajkowski/pisa/eee263c82c4023f92b8bad4232c37a19")
```

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/e87c7783fcd1906dd74210f86561fe31")
```


Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/672538c1a5d92c86ad3ffad9c361fc5c")
```


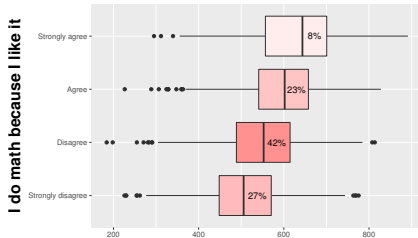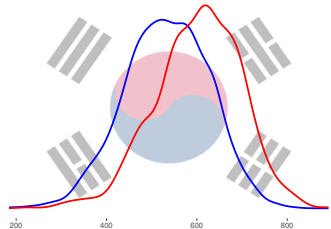Kazakhstan mean score is **50** out of 65 countries

```
aread("LRajkowski/pisa/f7d211f2880af9f7f607bbfb713f8e08")
```

Korea

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/1fb5abffa3f50ec4300921cada7e2741")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/f52db0ffdb05a68107d1356358551383")`

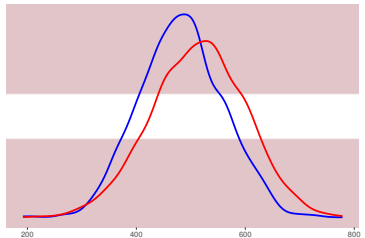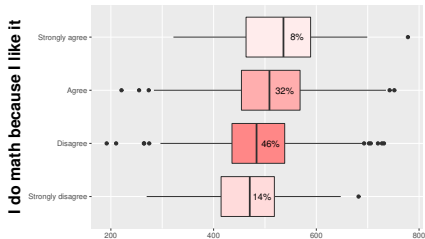Korea mean score is **5** out of 65 countries

`aread("LRajkowski/pisa/d4989acc2078e7de45e07936c751e85e")`

Latvia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/7a00f6e276f2f952da28fa7ad7fb8fb2")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/1aeba3eba03b96134985f7529ae293a2")`

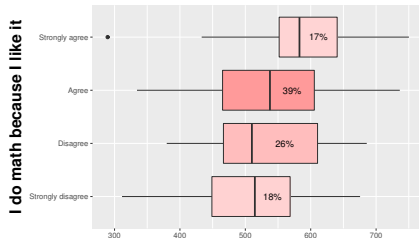Latvia mean score is **23** out of 65 countries

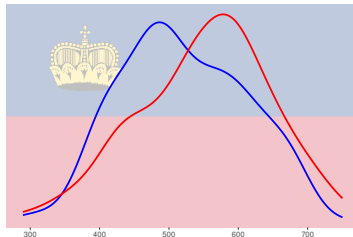`aread("LRajkowski/pisa/cabf1876a66e8775754687ec80a09090")`

Liechtenstein

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/d72cee5629600f016b2efac2b45aed67")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

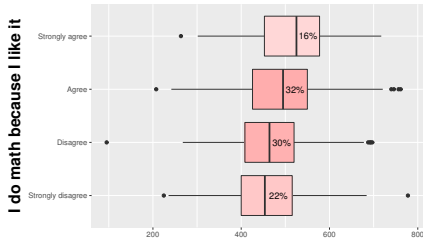`aread("LRajkowski/pisa/dcc1e23a407cc36e0f3d49725172eda1")`
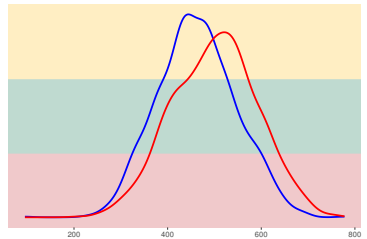

Liechtenstein mean score is **7** out of 65 countries

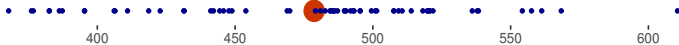`aread("LRajkowski/pisa/2dff2a8910b8d143b9a8eca739dcb825")`

Lithuania

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/12e615bd1968ee065d46bb1adeb0dd9b")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

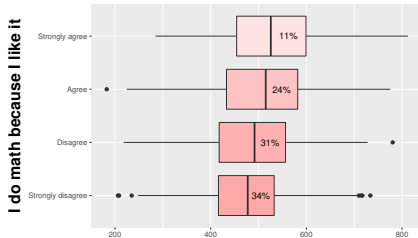`aread("LRajkowski/pisa/88ae8795dc4d308710adf9905d7f056c")`

Lithuania mean score is **40** out of 65 countries

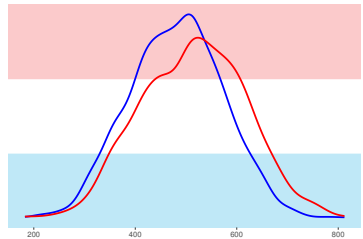`aread("LRajkowski/pisa/bd8cd90102519d7846af1f529d0453b1")`

Luxembourg

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/46371802687a84f5bee783f6c47d4578")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/9e317d7c8f01f86b9d20ba3db55c62ce")`

Luxembourg mean score is **28** out of 65 countries

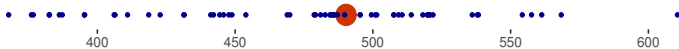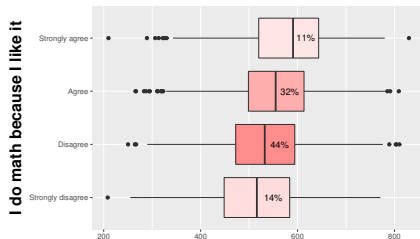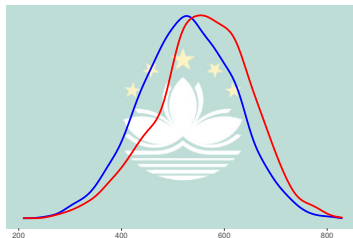`aread("LRajkowski/pisa/7dc98ff1ccc0aba9ac7c8554713d4c78")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/4111d940d680452214defb76ee4d344b")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

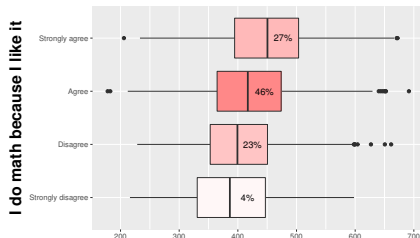`aread("LRajkowski/pisa/7dae70c47aee849425b8985153ac7956")`
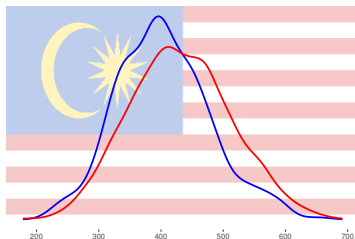

Macao-China mean score is **6** out of 65 countries

`aread("LRajkowski/pisa/9ef11cca30676588873a0d9d4915711a")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/ef5d2b9bd57af92d73f9197cc1629d8f")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

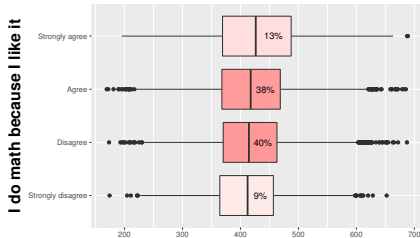`aread("LRajkowski/pisa/5629b3a712385faef53b310c0a72edbf")`

Malaysia mean score is **52** out of 65 countries

`aread("LRajkowski/pisa/9cdeb1872198a6f129bf5376ddfaaac5")`

Mexico

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/3f2d6dcf86e7dd0b74a9393daf440541")
```

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/c305f5b391eeb4fd36afd6185d17fc36")
```


Mexico mean score is **53** out of 65 countries

```
aread("LRajkowski/pisa/469ab5fc6b844b09aac790f6a8d50563")
```
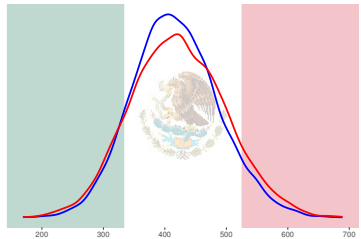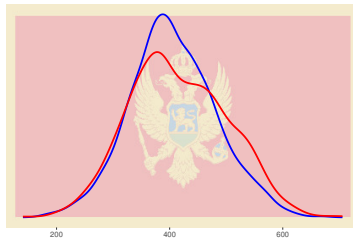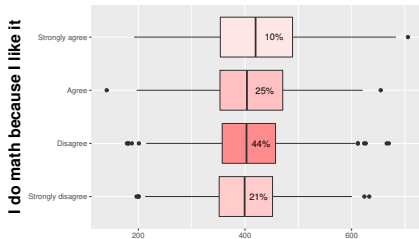
Montenegro

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/d59733d229aaa9f10b024a330c47d211")
```

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/07cfa3f93970276136d5080cea73ba53")
```
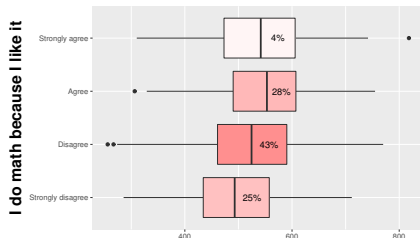

Montenegro mean score is **55** out of 65 countries

```
aread("LRajkowski/pisa/7a46eb6b4454a7d18f0ec0e7fa6a20af")
```
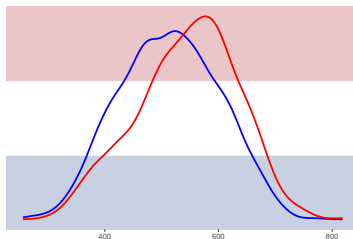
Netherlands

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/d104759e46c61675be62a8c42c8c3280")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

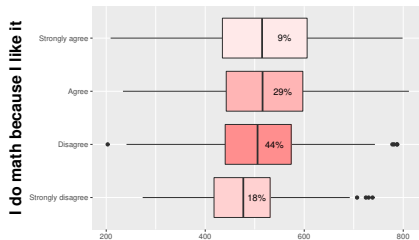aread("LRajkowski/pisa/a67cde60248d8fb5aac7262f4914eb19")

Netherlands mean score is **14** out of 65 countries
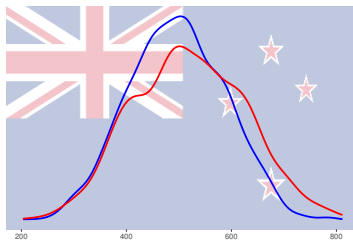
aread("LRajkowski/pisa/09a42ed12330d0e96c1cfff3a95ff715")

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/b6dea84ed675285e3a630f3a06f76145")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

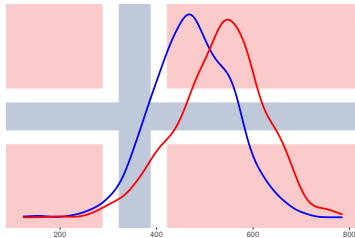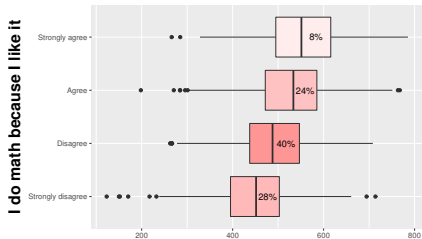`aread("LRajkowski/pisa/f3c90ee4fe9dd29711c44499891986a6")`

New Zealand mean score is **20** out of 65 countries

`aread("LRajkowski/pisa/47cc6d4dffbcde54835d2435edde8ca7")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/503527062588f9f65d586f631e2c11b9")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

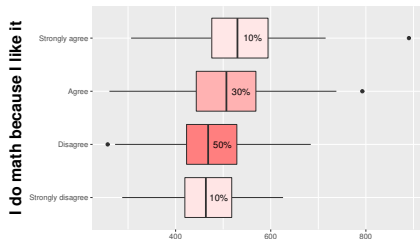`aread("LRajkowski/pisa/d97015b645a21d5ed1da01f78272f663")`
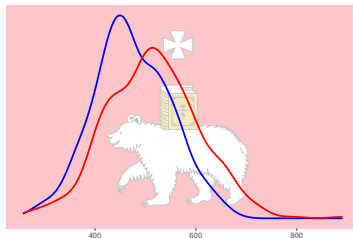

Norway mean score is **29** out of 65 countries

`aread("LRajkowski/pisa/77404bc85c20ebfa4610811a62248526")`

Perm(Russian Federation)

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/25e35b2d8fc0fdff0ffec8a830de11cd")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/119e3cddf8467965991b09630b8b56e9")`

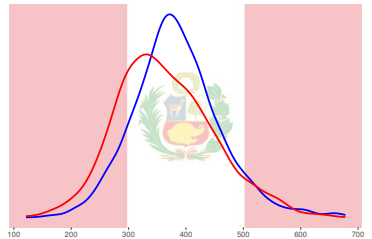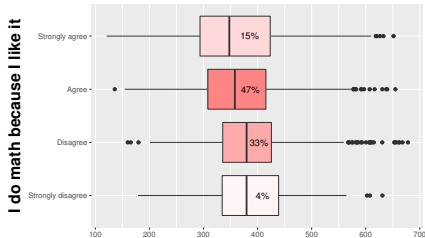Perm(Russian Federation) mean score is **31** out of 65 countries

`aread("LRajkowski/pisa/f88b5ed1ae9884424ce794b070000899")`

Peru

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/0b0b2bc54e551967d77ab94d85110e63")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

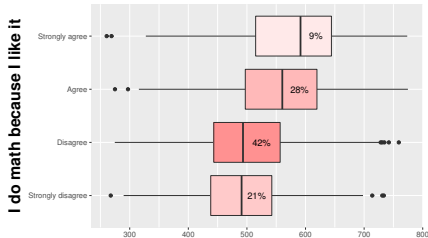aread("LRajkowski/pisa/7163e3f8b3802fd0ea68490d7619f665")

Peru mean score is **65** out of 65 countries

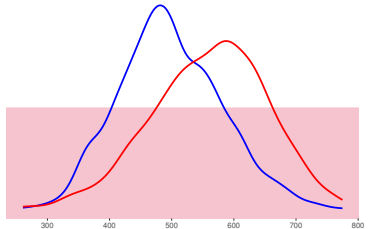aread("LRajkowski/pisa/2be17a1876ddc2b15d2b4152e86d70d3")

Poland

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/7ccef0875fcc4a8c9d969f8d05803c09")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/c0d6d6989fa224d0f5bc2776ecc335c4")`

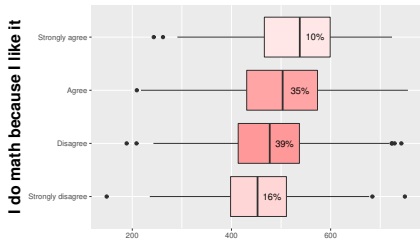Poland mean score is **11** out of 65 countries

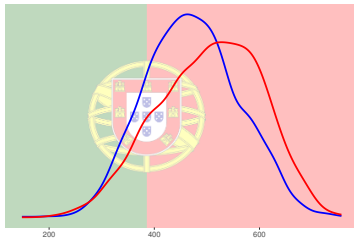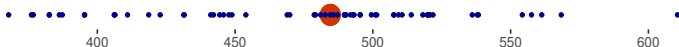`aread("LRajkowski/pisa/b748ba017fedef1c63e960b5fa04010d")`

Portugal

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/8f48edcc35c75389ad47b43564a5cc34")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

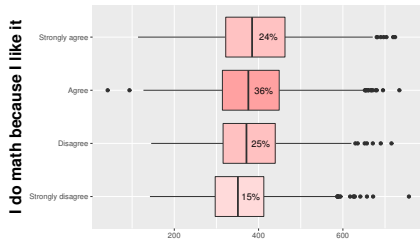`aread("LRajkowski/pisa/302261479c28d4754931d6376da8c645")`

Portugal mean score is **35** out of 65 countries

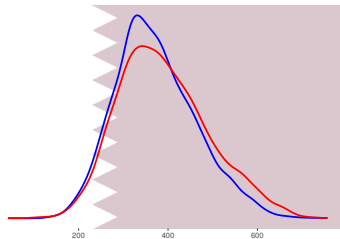`aread("LRajkowski/pisa/525da0dae2717f43e4596684e4d7a5b7")`

Qatar

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/de023bec976b54a54c9e104605308388")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

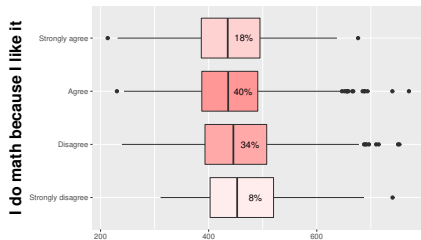`aread("LRajkowski/pisa/137429a742e94a0619cd4df300df6fcb")`

Qatar mean score is **63** out of 65 countries

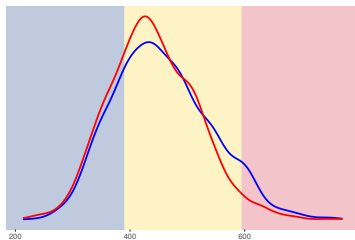`aread("LRajkowski/pisa/a4772791ec4b2218f4ba62103faf481a")`

Romania

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/1fb08bbc944b67e810e8781d255723cb")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

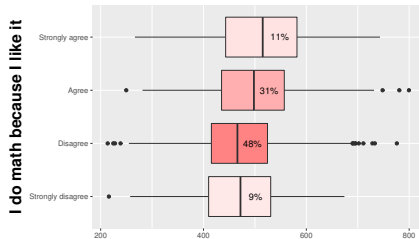`aread("LRajkowski/pisa/4ec230c0978b5175b2de1804f35a4445")`

Romania mean score is **46** out of 65 countries

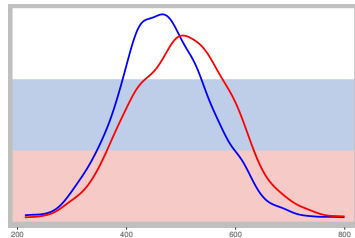`aread("LRajkowski/pisa/5c6c605b1c89a4bf2b300711a55ddaba")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/5947682a635ae95f364c185451610a7f")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

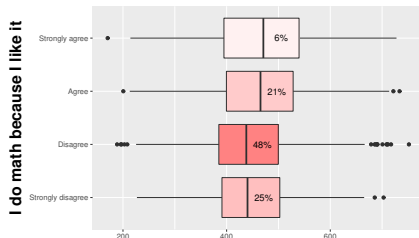`aread("LRajkowski/pisa/4e1db207c6270cec1b3146f7743afade")`

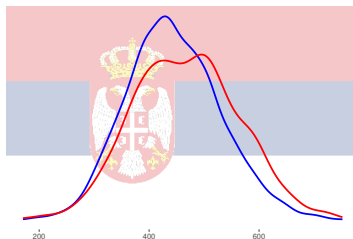
Russian Federation mean score is **37** out of 65 countries

`aread("LRajkowski/pisa/63e09363d8eb4a90586172d7fe986258")`

Serbia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/d0dd15017a0d8eef50f1d9029ecfe8d8")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

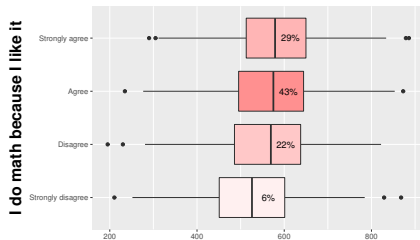`aread("LRajkowski/pisa/5f306b915e297c915e6bbc4e589b1c0e")`

Serbia mean score is **45** out of 65 countries

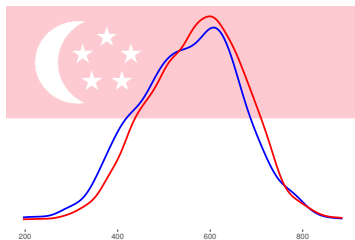`aread("LRajkowski/pisa/d866679fe7d9e534e7be7c2ff4eabb9d")`

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/8549253ead04b0a99564909cdf6c2d16")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

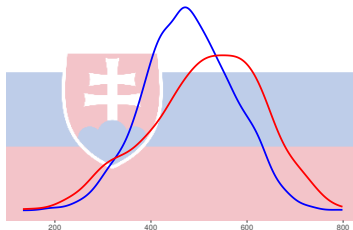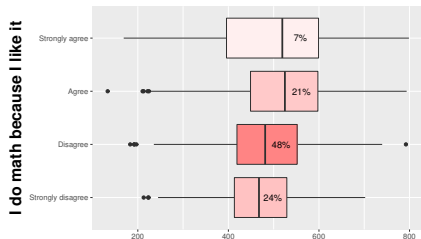aread("LRajkowski/pisa/61eb565f5473bb99cadff42bae5343ee")

Singapore mean score is **2** out of 65 countries

aread("LRajkowski/pisa/b506ffcb24b44740ccb9a56d54b72c00")

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/348d6af8c152fee2990cf58afe7d1299")
```


Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/9cdfc39bc961352eab982c6be450eaa1")
```
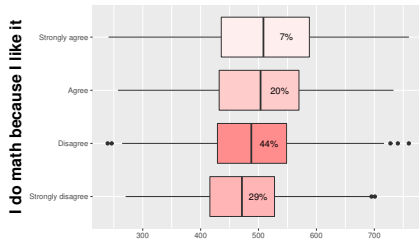

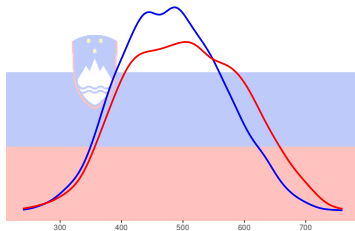Slovak Republic mean score is **33** out of 65 countries

```
aread("LRajkowski/pisa/4610563afa597fc723f23df21dc03045")
```

Slovenia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/5bc1302e6fda041b33c991c0402bf8a9")
```

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/3d6e69d09b5b788834abaf600f8c60ff")
```
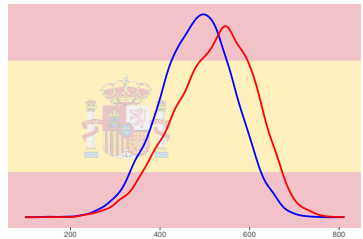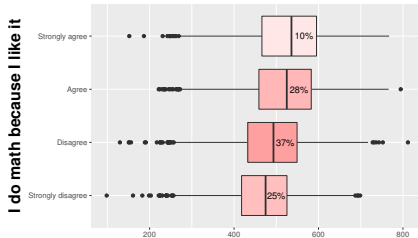

Slovenia mean score is **36** out of 65 countries

```
aread("LRajkowski/pisa/624968fe8b5fe59a882bd9f55543a103")
```

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/545800210737f3d60ab388957d78882c")
```


Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/0a2fecd89da54dcaf0456af7cea2d027")
```
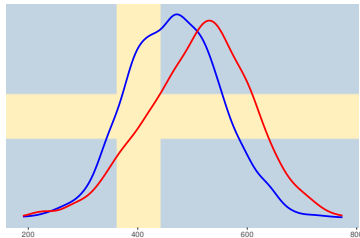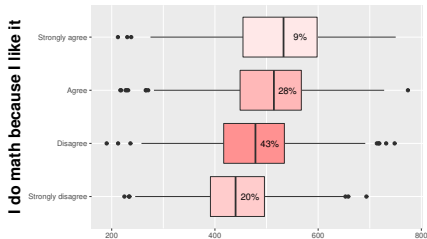

Spain mean score is **24** out of 65 countries

```
aread("LRajkowski/pisa/ec6b3a542a016b079b0957d8a2d3f7c0")
```

Sweden

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/63590defe68251ef436d0c3804526262")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/8323d9951eb82b3038698d502decbddd")`

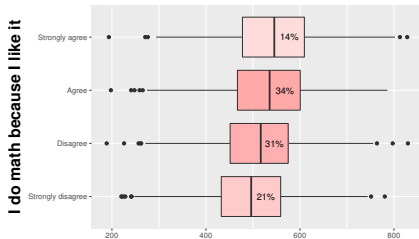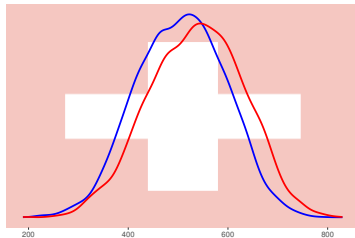Sweden mean score is **39** out of 65 countries

`aread("LRajkowski/pisa/7aa6825112abb9cff8ca58cf3ae66653")`

Switzerland

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/bd4afb3ca91d43ad6d3ace02b44a0bb2")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

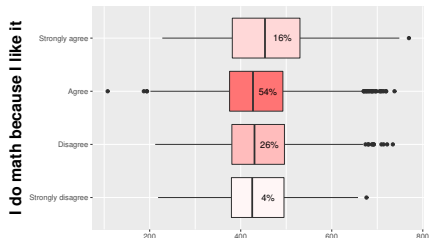aread("LRajkowski/pisa/80cdb04c93e930ae300cc448a8a5bcd0")

Switzerland mean score is **10** out of 65 countries

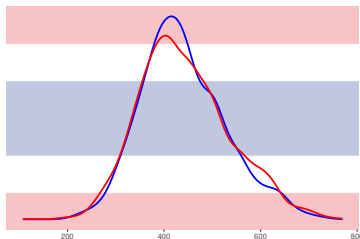aread("LRajkowski/pisa/8ab2a5200bcbeded869c1cfc5bfc4cc4")

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/b7c1a7b6d3c0c7fe4315cfac8b91cd27")
```

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/c1072495899d51fa676b6602e98157a5")
```
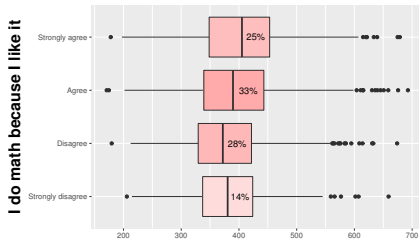
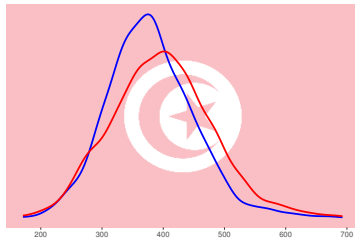Thailand mean score is **49** out of 65 countries

```
aread("LRajkowski/pisa/e4e44d8bd479b5f905563b702a87cd2f")
```

Tunisia

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/53bf142eb4dcb9e9683e3600d66746d1")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

aread("LRajkowski/pisa/f21d3d6717bcd95d10a678fa384fdcd1")

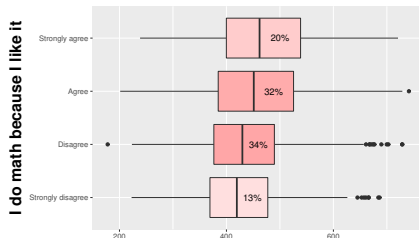Tunisia mean score is **59** out of 65 countries

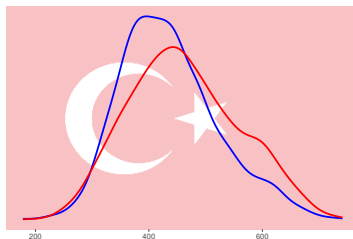aread("LRajkowski/pisa/591b8793bb0b9d34d589e7e23dbb00f1")

Turkey

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

```
aread("LRajkowski/pisa/a06e08693f621f0c0117d4fb6afbc3f1")
```


Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

```
aread("LRajkowski/pisa/7d563085643cf99791895a9e725cbbeb")
```
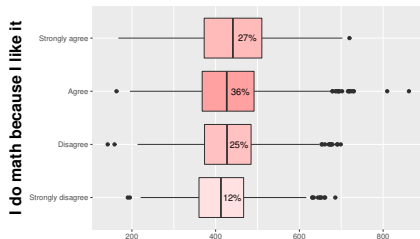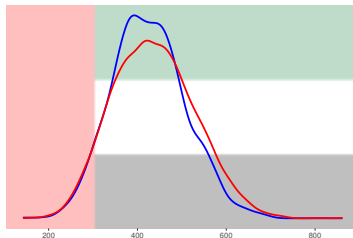

Turkey mean score is **44** out of 65 countries

```
aread("LRajkowski/pisa/9aa860670e9756602fcc4dfe82ea1cd9")
```

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/4e718e4dd155deb9f46583cd951554a4")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

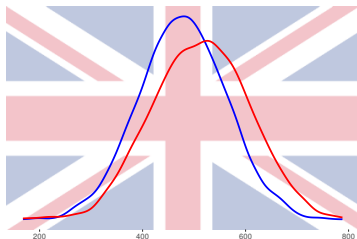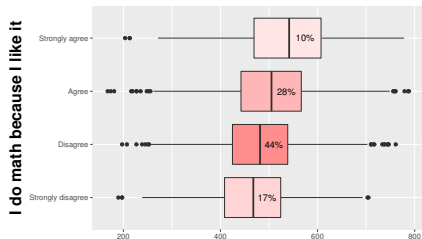`aread("LRajkowski/pisa/3ad95a529ec0c0b50d9e53530b38f883")`

United Arab Emirates mean score is **51** out of 65 countries

`aread("LRajkowski/pisa/cdd485b98b94eaab1d07df245da87724")`

United Kingdom

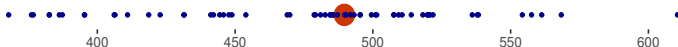**Boxplots** of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/7d26a9da642715b93fe44516413fae30")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

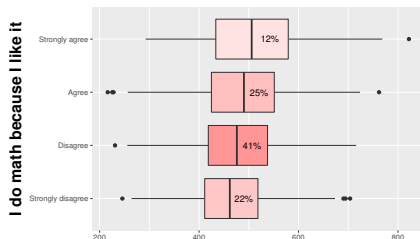`aread("LRajkowski/pisa/0ba36bafe9794171fd4bbaa71829f8df")`

United Kingdom mean score is **30** out of 65 countries

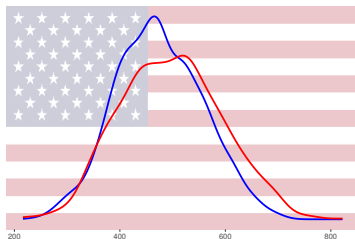`aread("LRajkowski/pisa/b41e8fb16ea3e4f2bea8d38dba18803e")`

United States of America

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

aread("LRajkowski/pisa/a8be8af6f9140fe0101c5447e2b84067")

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

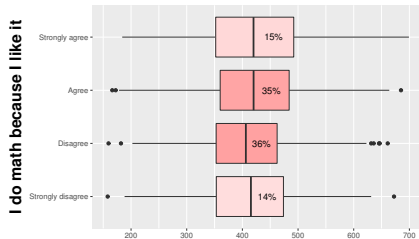aread("LRajkowski/pisa/21f6ccca5bec6e7cc3fdeaa7ecb4f748")
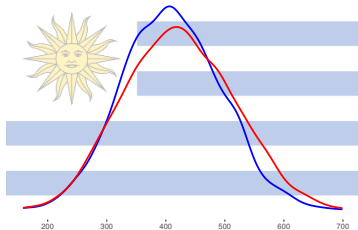

United States of America mean score is **38** out of 65 countries

aread("LRajkowski/pisa/c5647e6eceb1a7f3ce0850436bc9f20e")

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/ad071410b40d9af3fc50082ec687a957")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

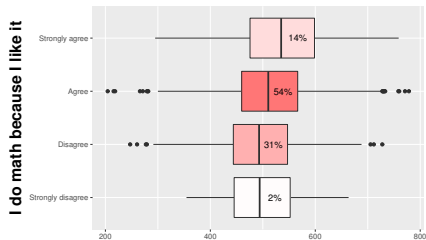`aread("LRajkowski/pisa/6e62f87e9a01f2d4e05d87c3bb4d7699")`

Uruguay mean score is **54** out of 65 countries

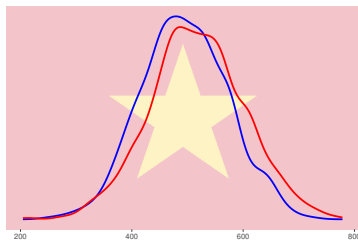`aread("LRajkowski/pisa/182fabeddb6ec96dbb1f655ec0d31c0e")`

Vietnam

Boxplots of the test score. The number on the box is the percentage of students within the group. It is also indicated by the fill.

`aread("LRajkowski/pisa/2490da54e80eae6ed3d648ee5e765e2d")`

Density estimation of the test score within the groups of (strong) likers and (strong) dislikers.

`aread("LRajkowski/pisa/dac554bd927ba94927c22e9173e8eaa1")`

Vietnam mean score is **16** out of 65 countries

`aread("LRajkowski/pisa/2c2316e20eeab958717b3b02ca229429")`