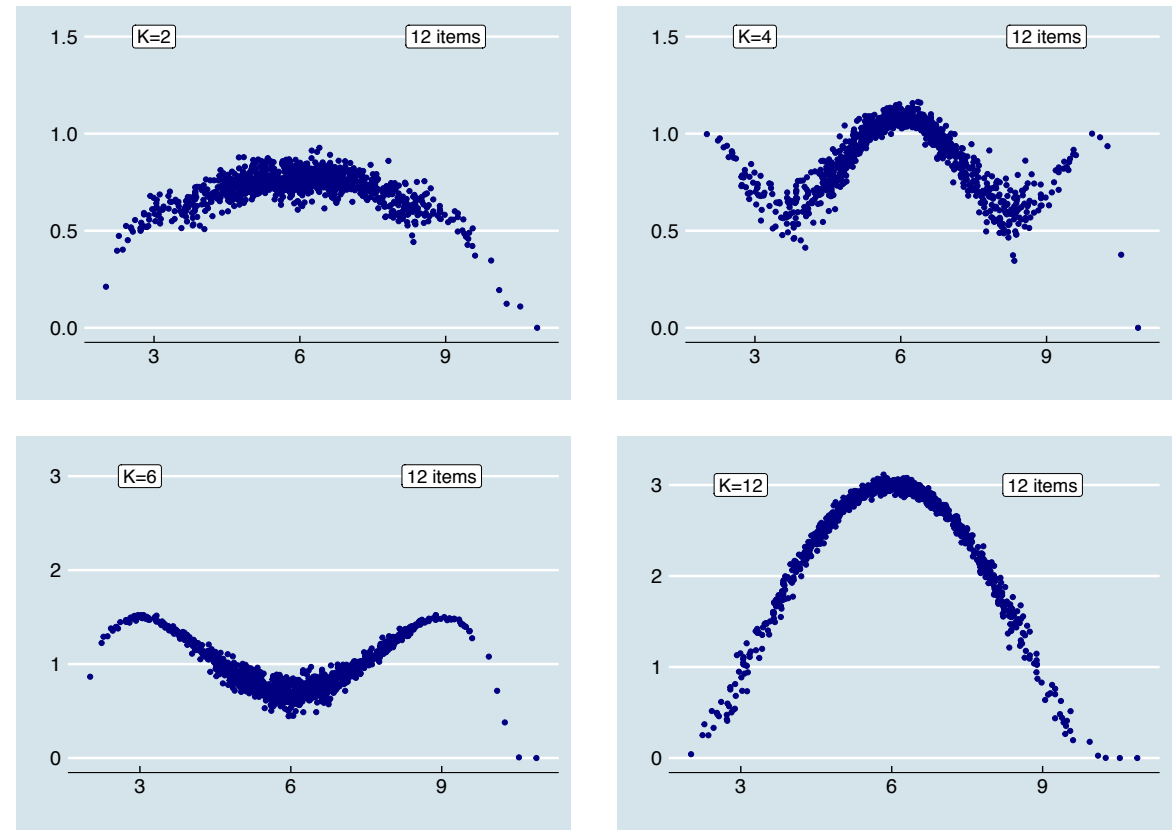


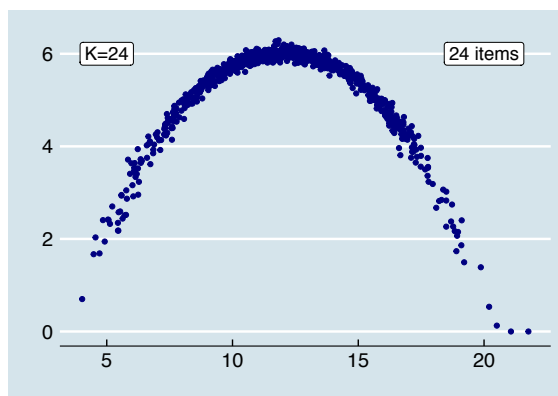
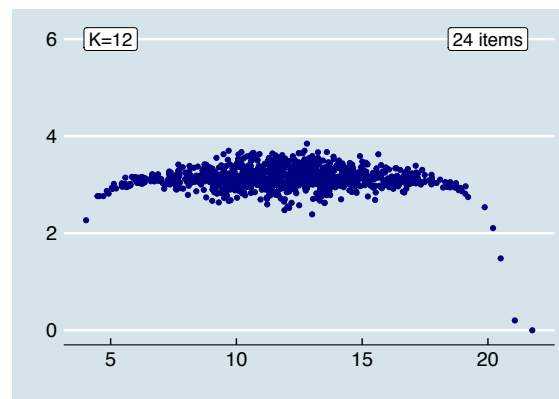
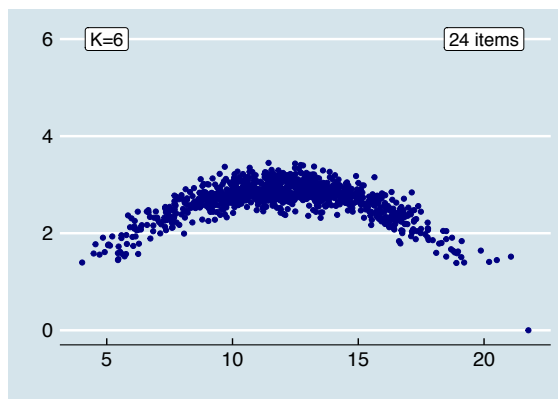
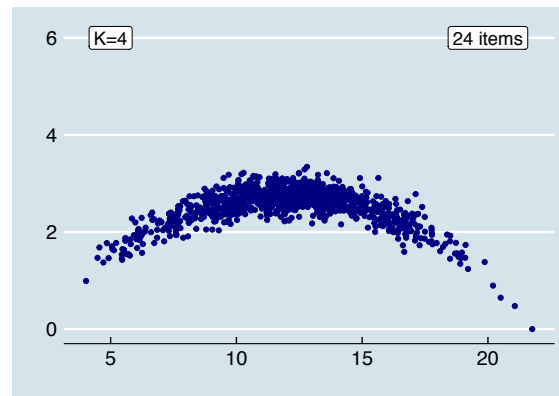
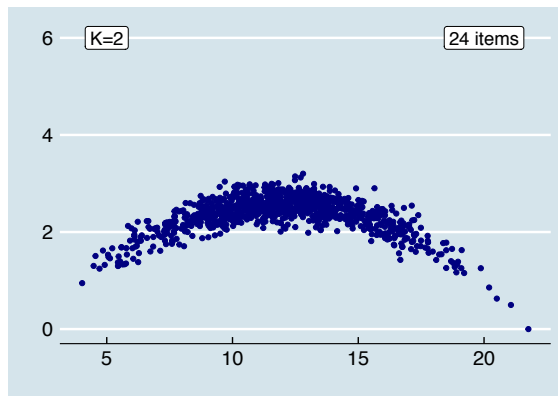
Appendices

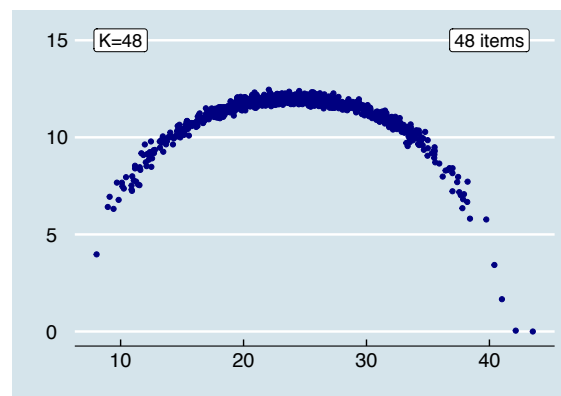
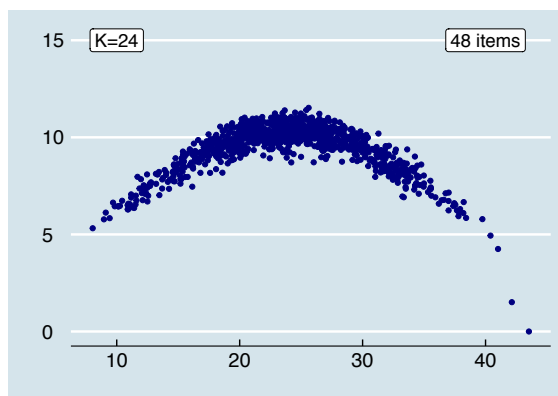
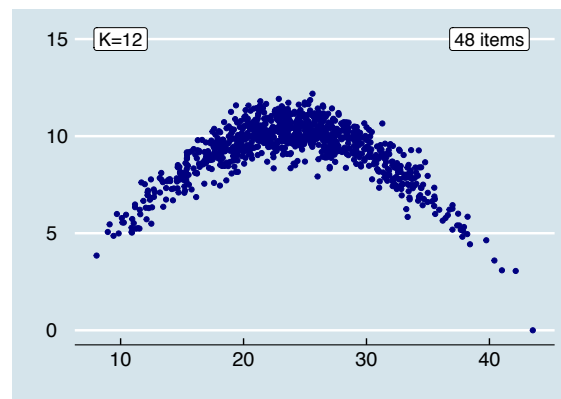
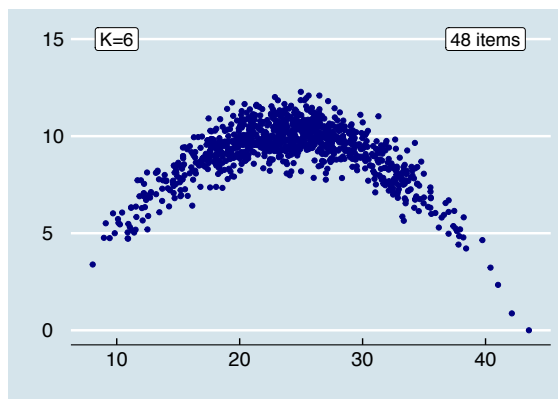
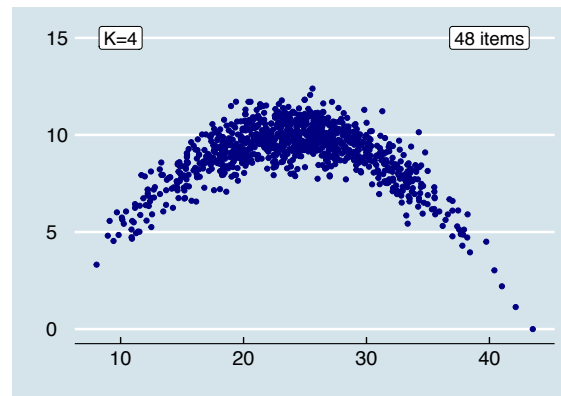
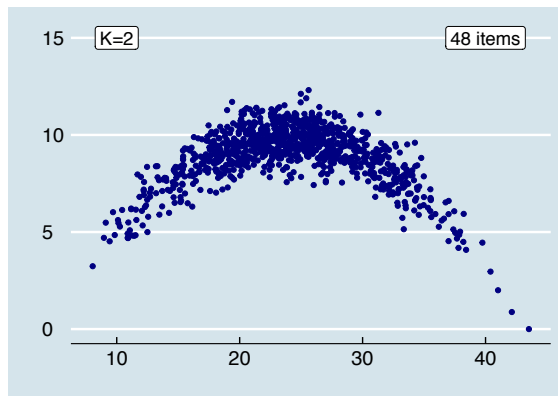
Appendix A. Relationship ‘true’ score and error variance after truncation and rounding



12 items

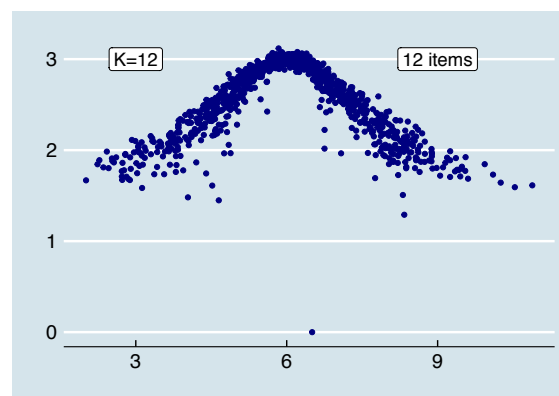
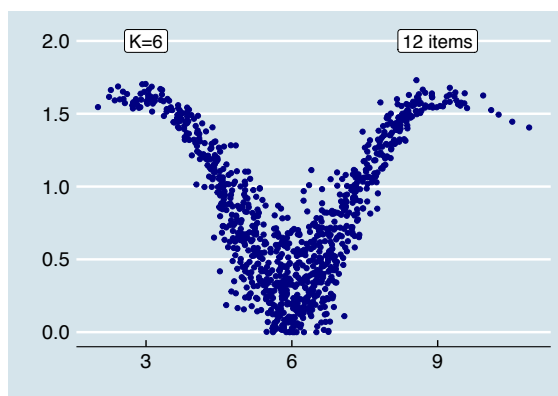
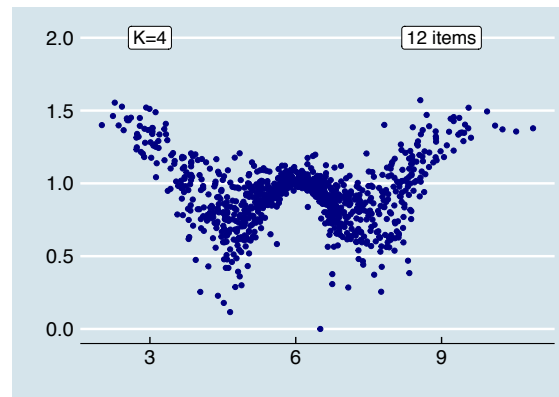
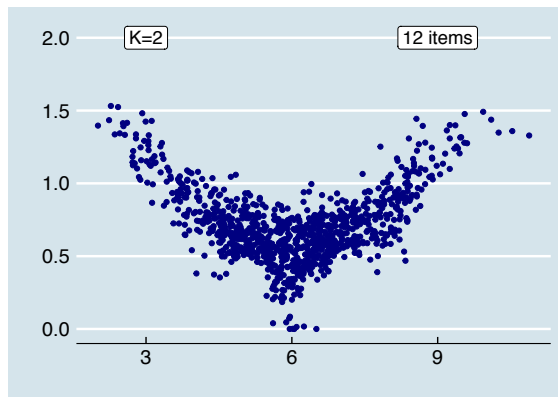


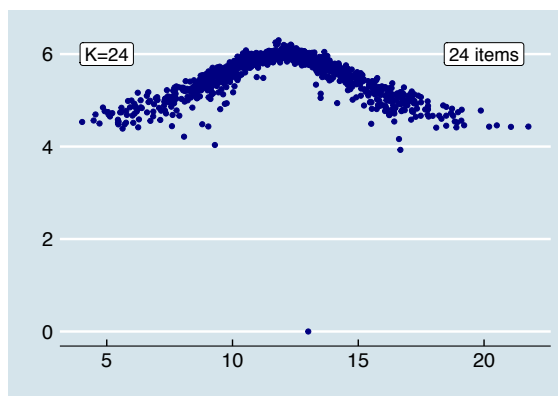
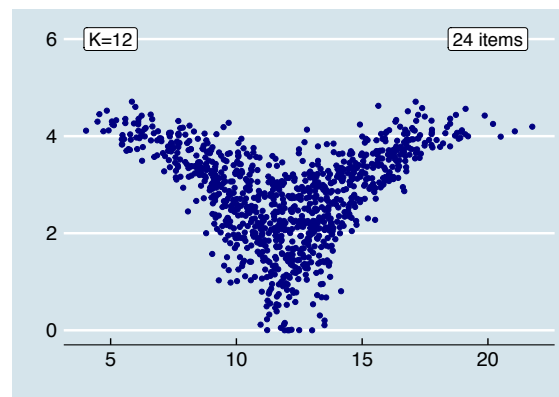
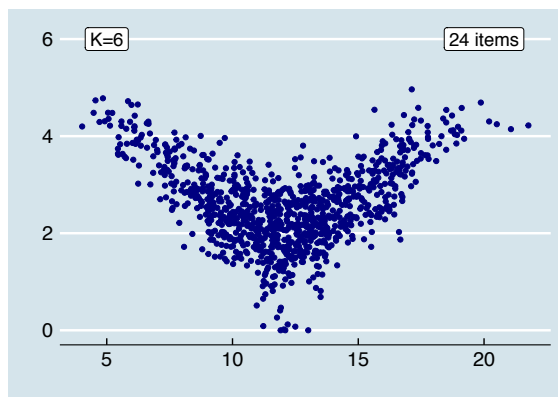
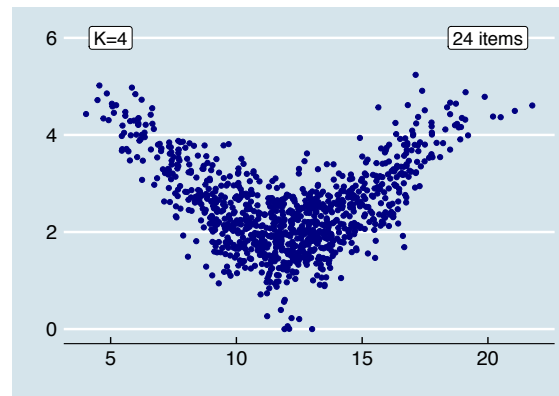
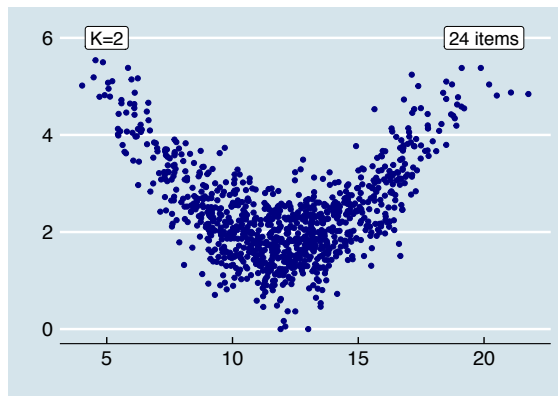
24 items

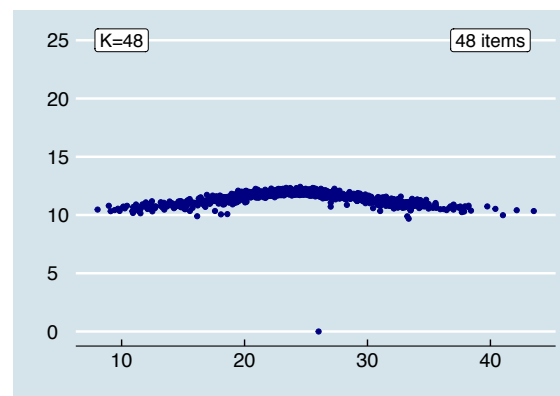
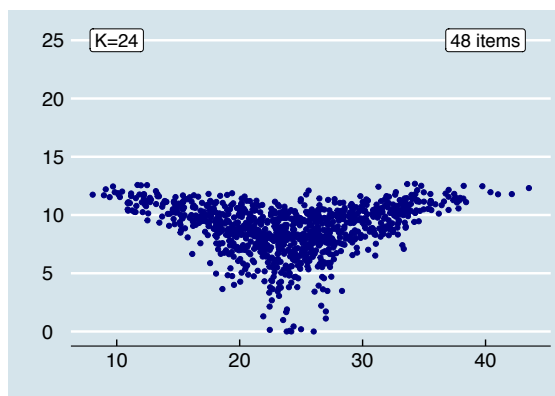
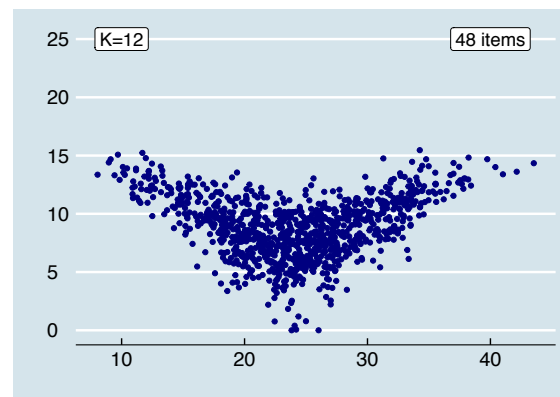
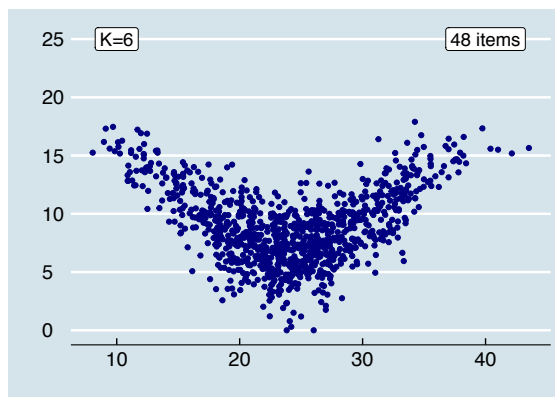
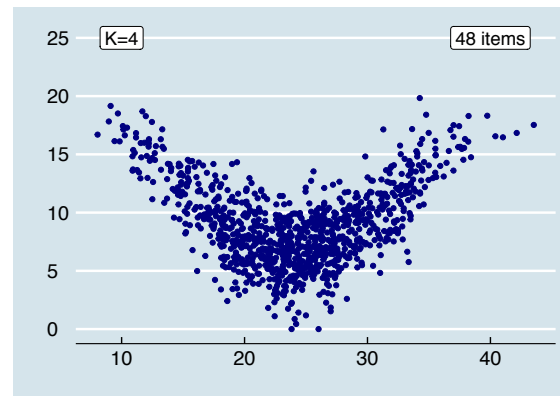
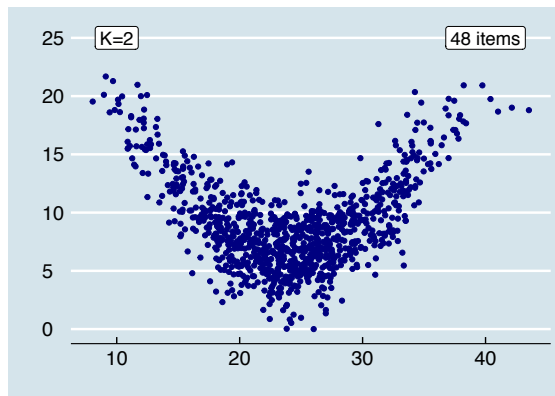
48 items



Relationship 2

12 items

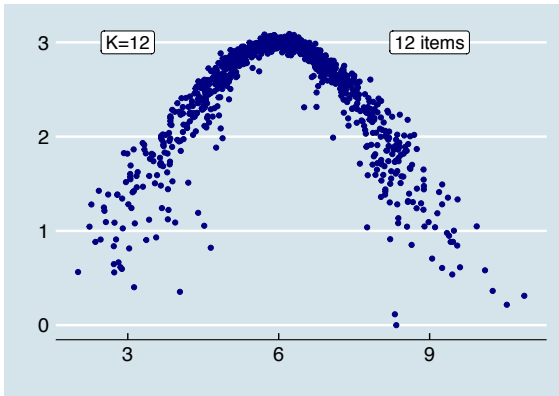
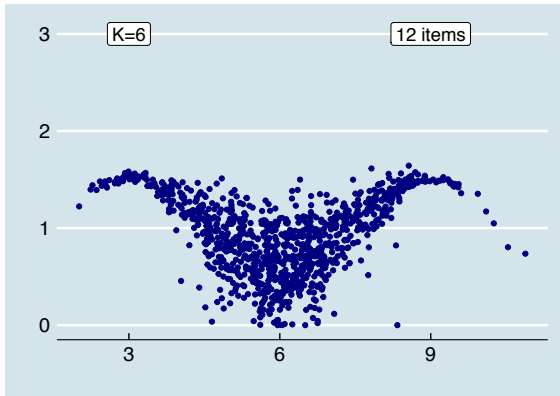
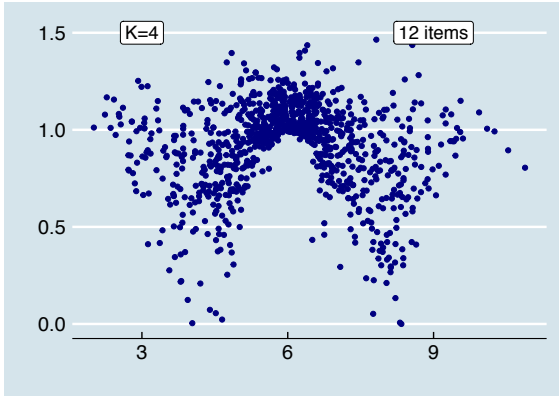
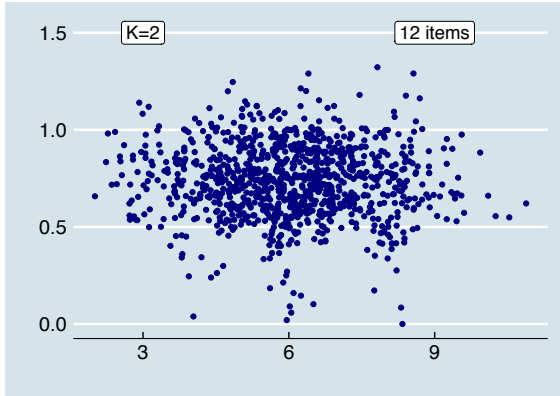
24 items

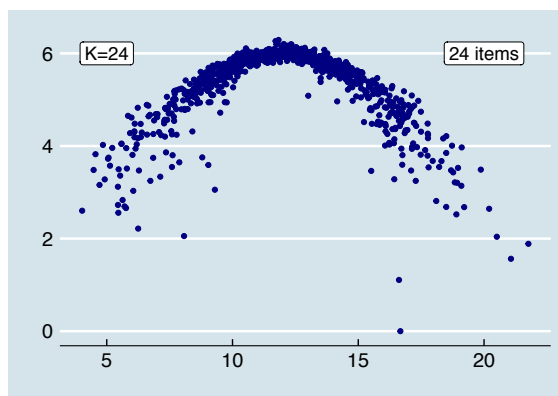
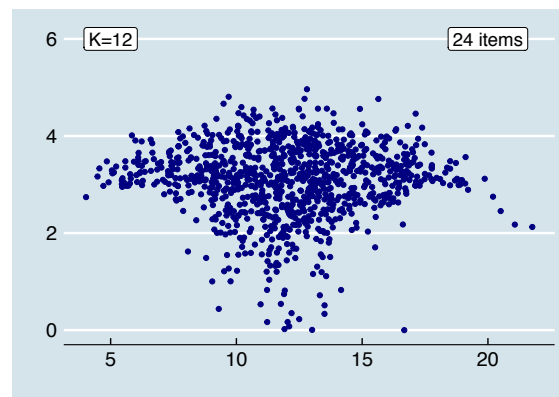
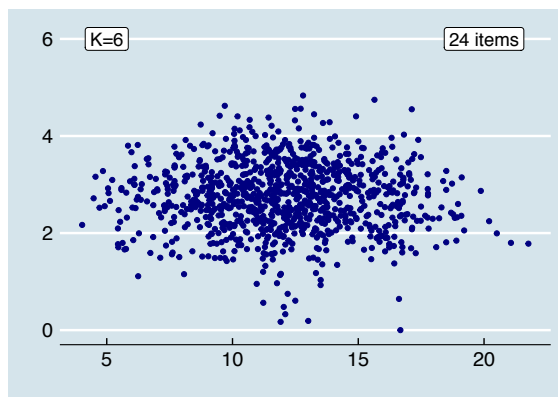
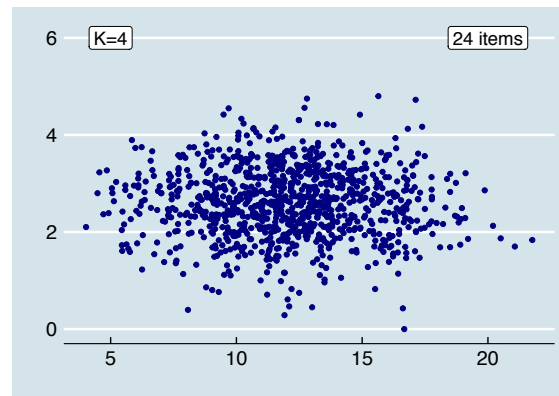
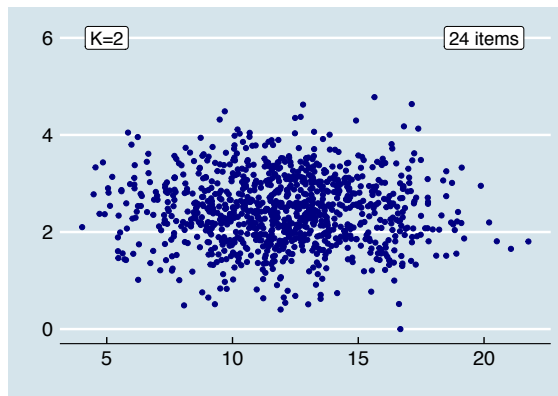
48 items

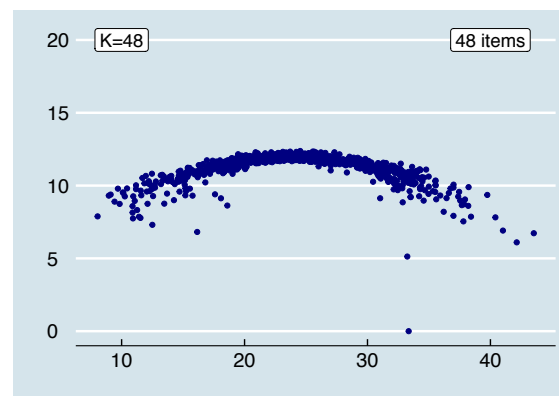
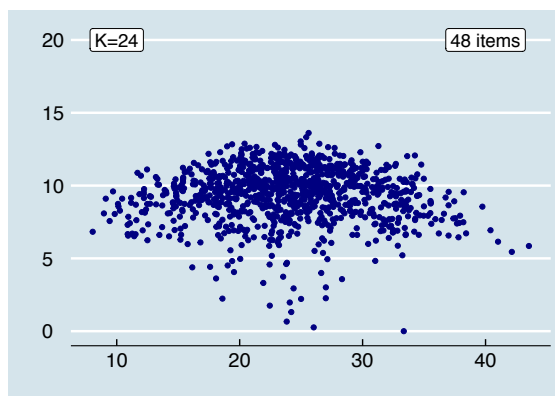
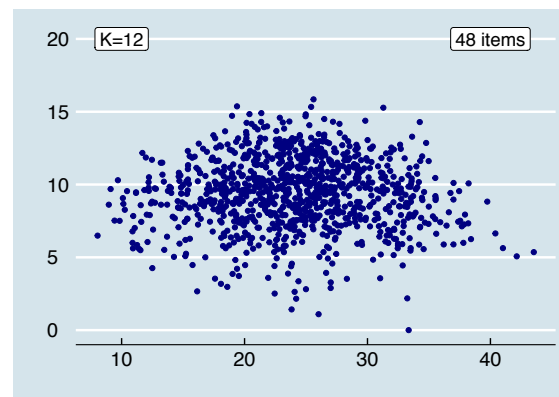
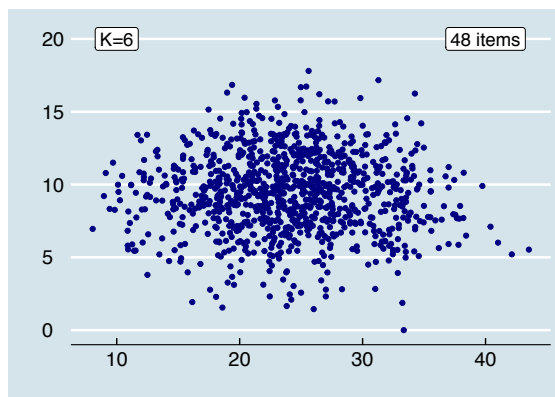
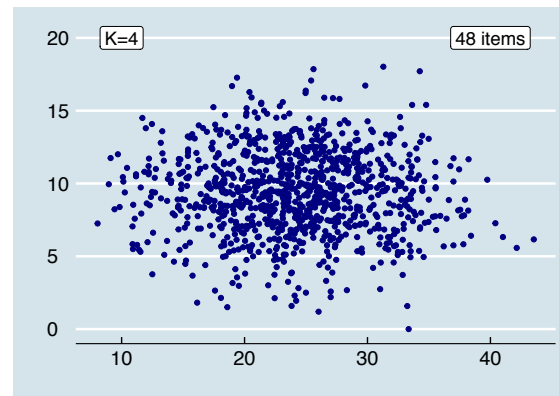
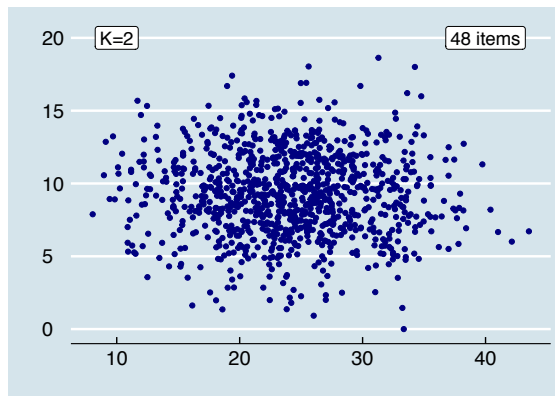


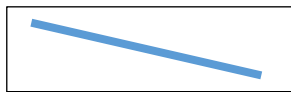
Relationship 3

12 items

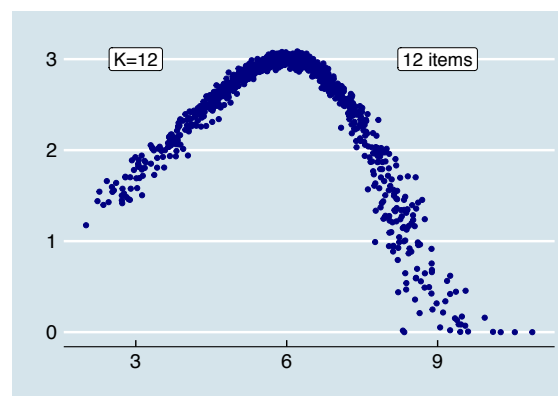
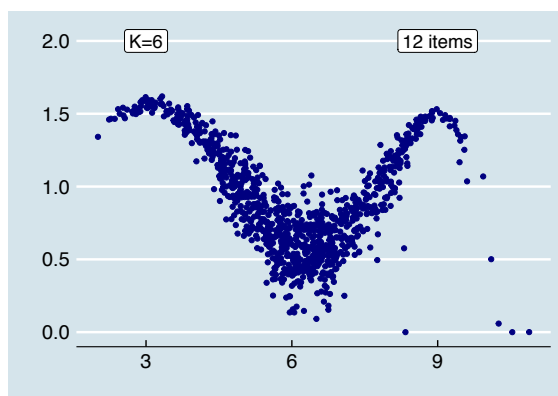
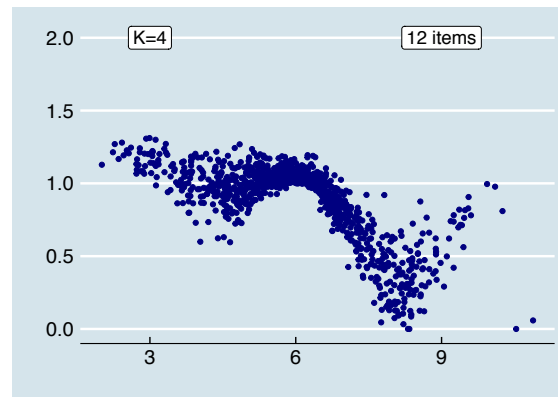
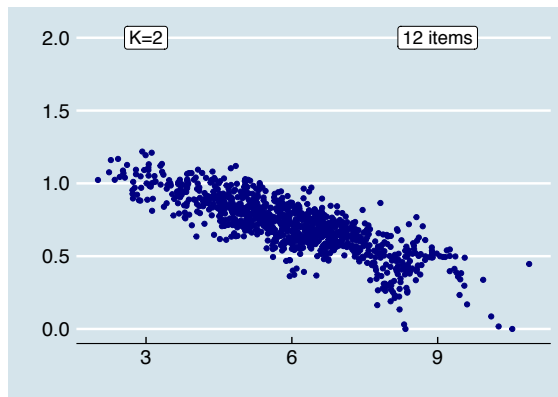


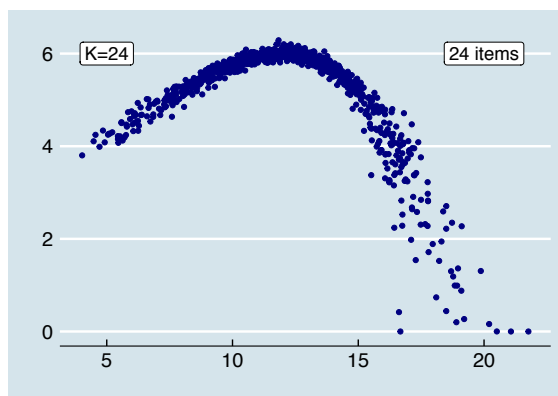
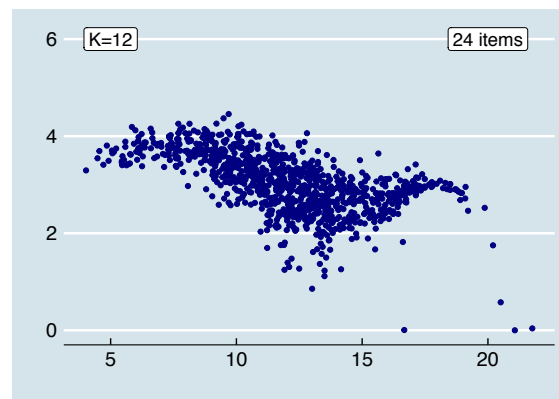
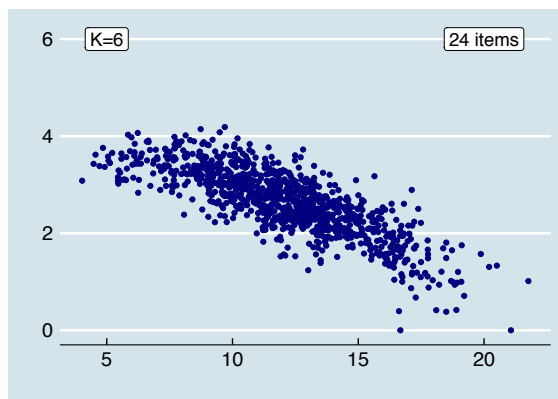
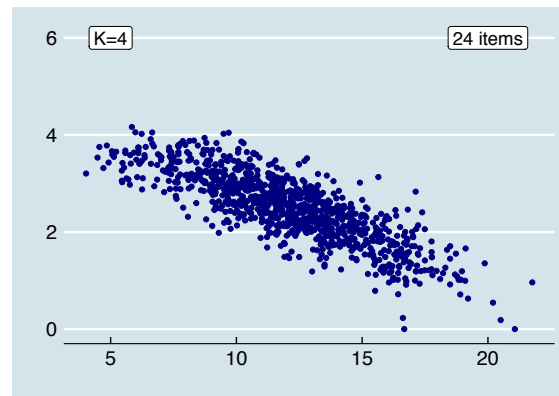
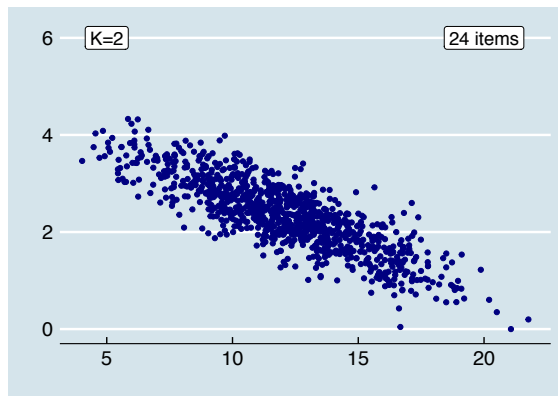
24 items

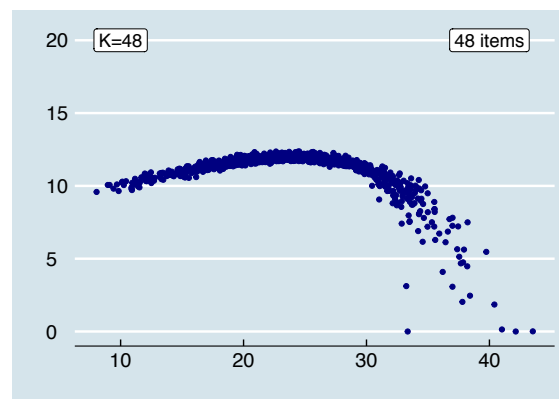
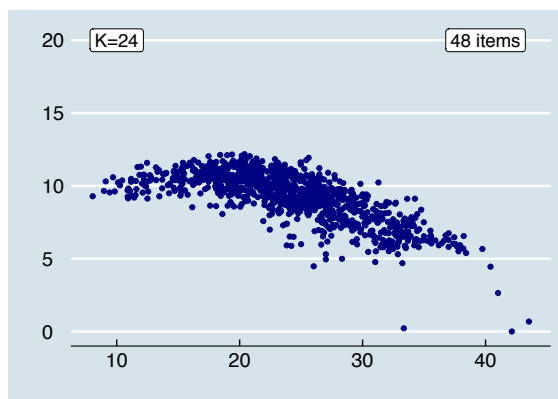
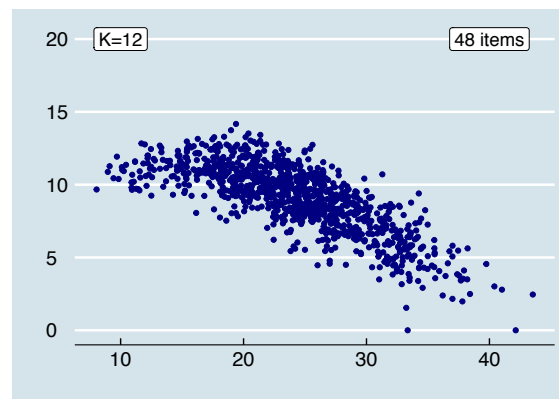
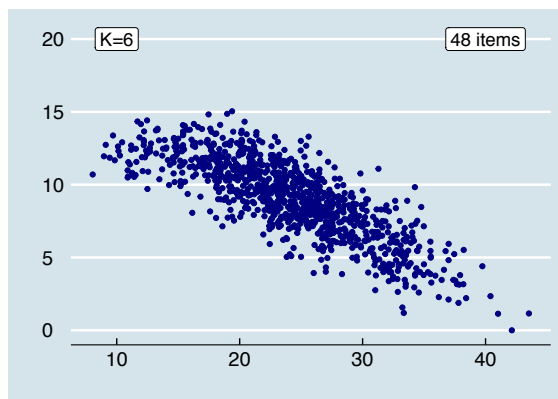
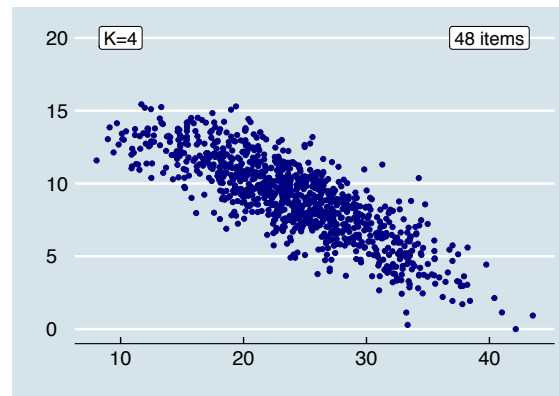
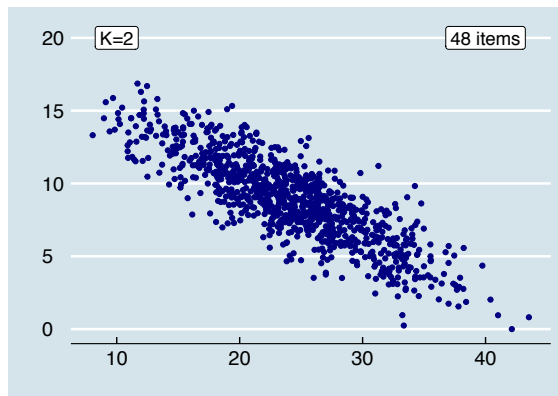
48 items



Relationship 4

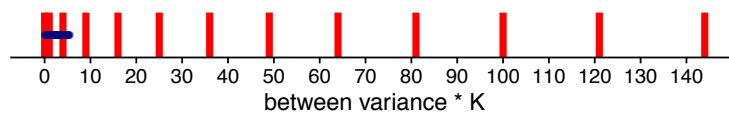
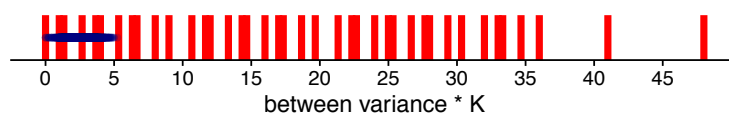
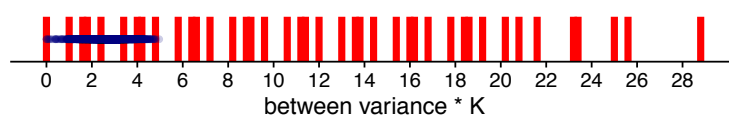
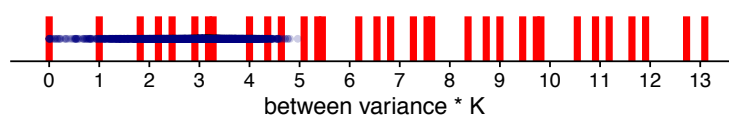
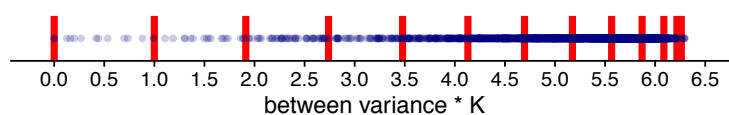
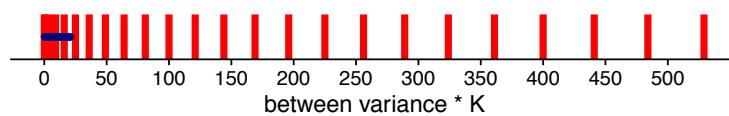
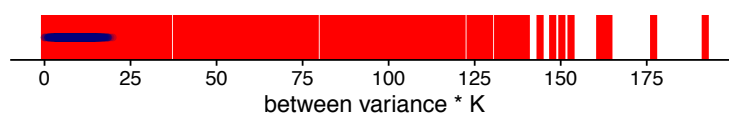
12 items

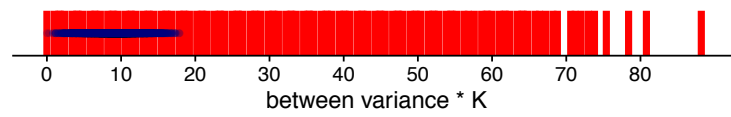
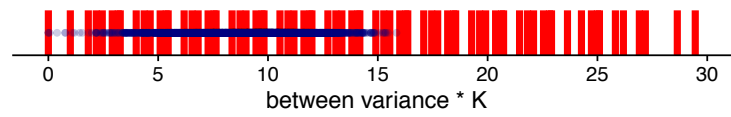
24 items

48 items

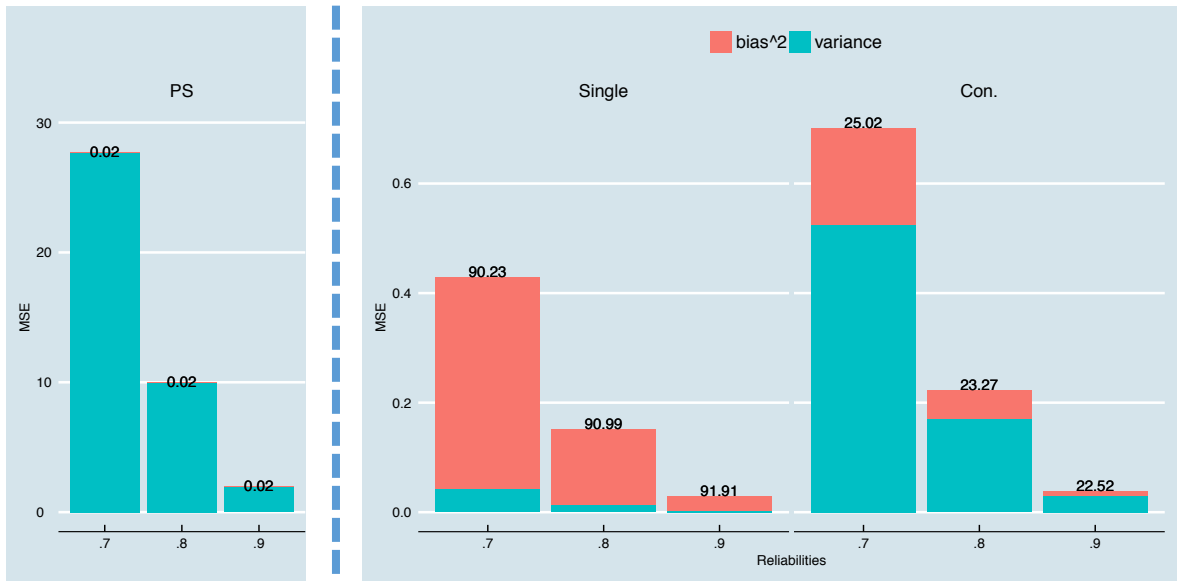
Appendix B.

Number of options of the between variance

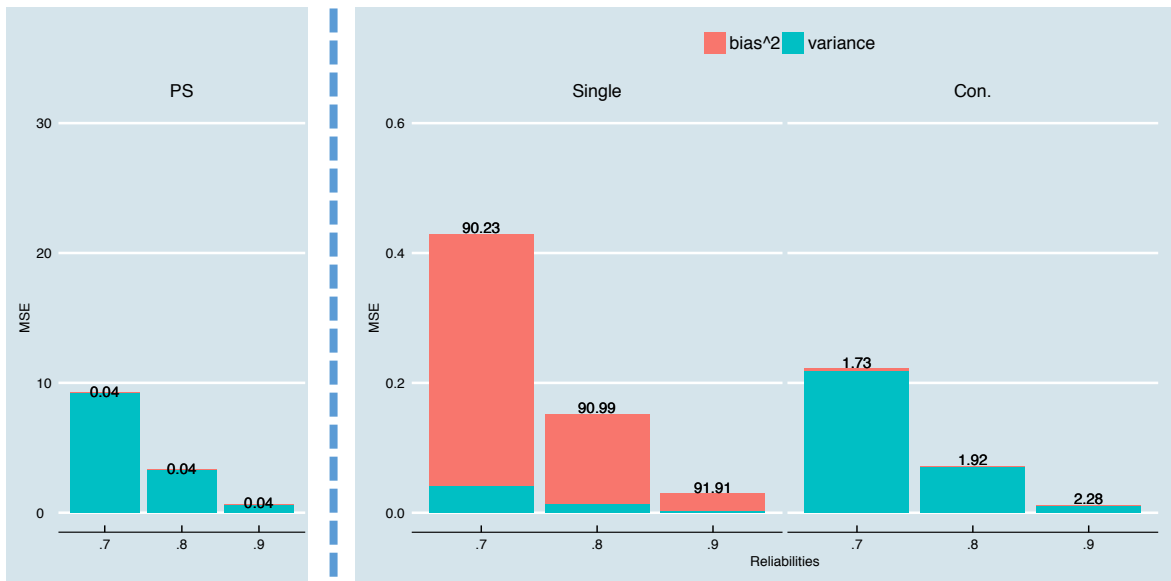
24 items(a) $K = 2$ (b) $K = 4$ (c) $K = 6$ (d) $K = 12$ (e) $K = 24$ **48 items**(a) $K = 2$ (b) $K = 4$

(c) $K = 6$ (d) $K = 12$

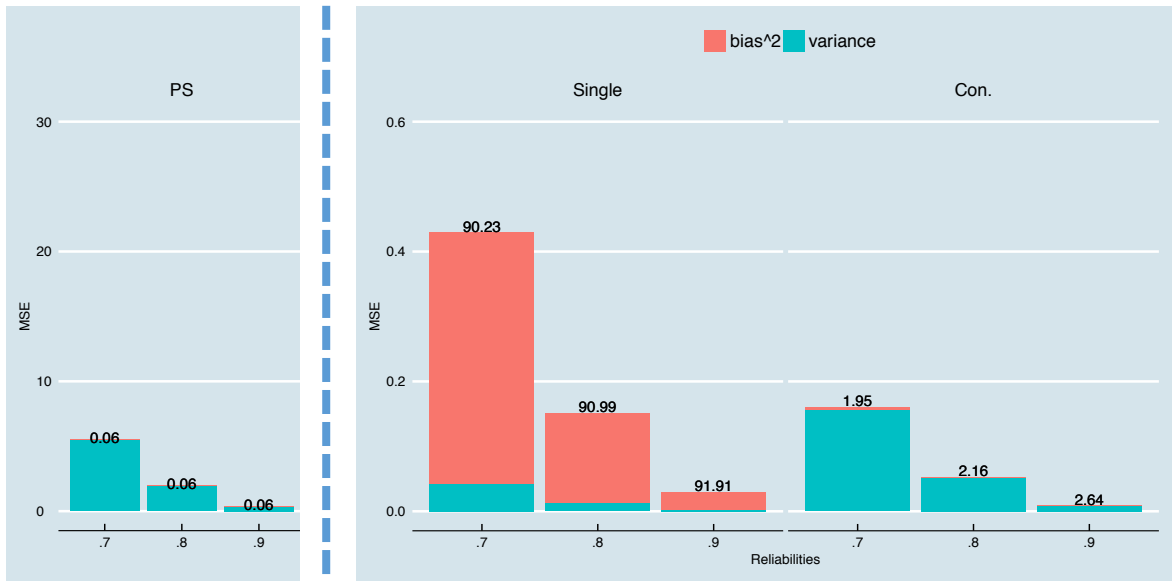
Appendix C.



(a) K=2



(b) K=4

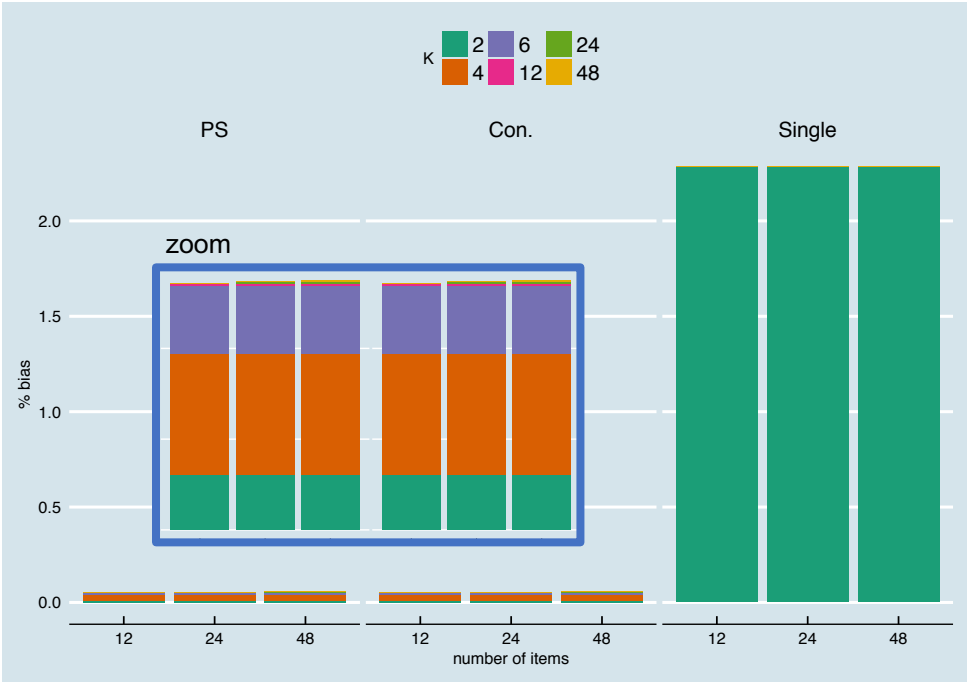


(c) K=6

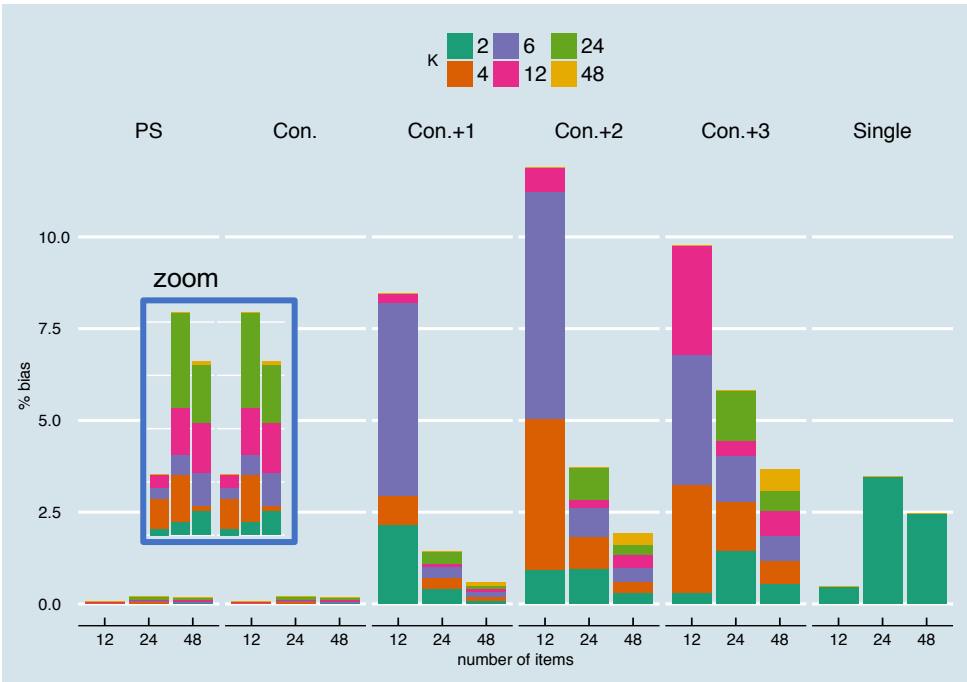
Appendix D.



% bias, after 10,000 test takes

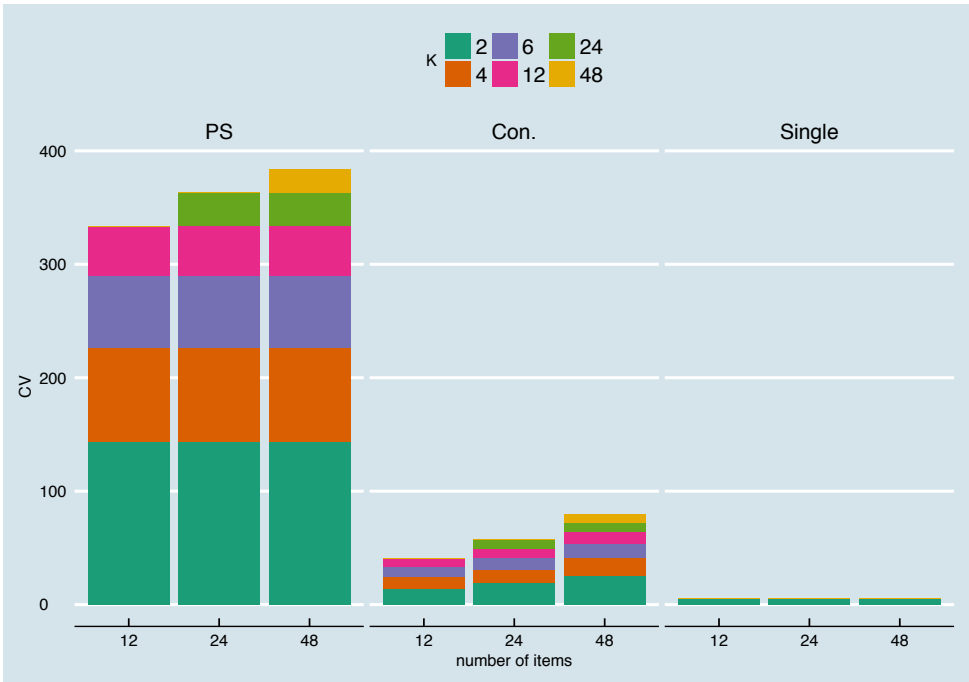


(a) Based on continuous parallel test scores

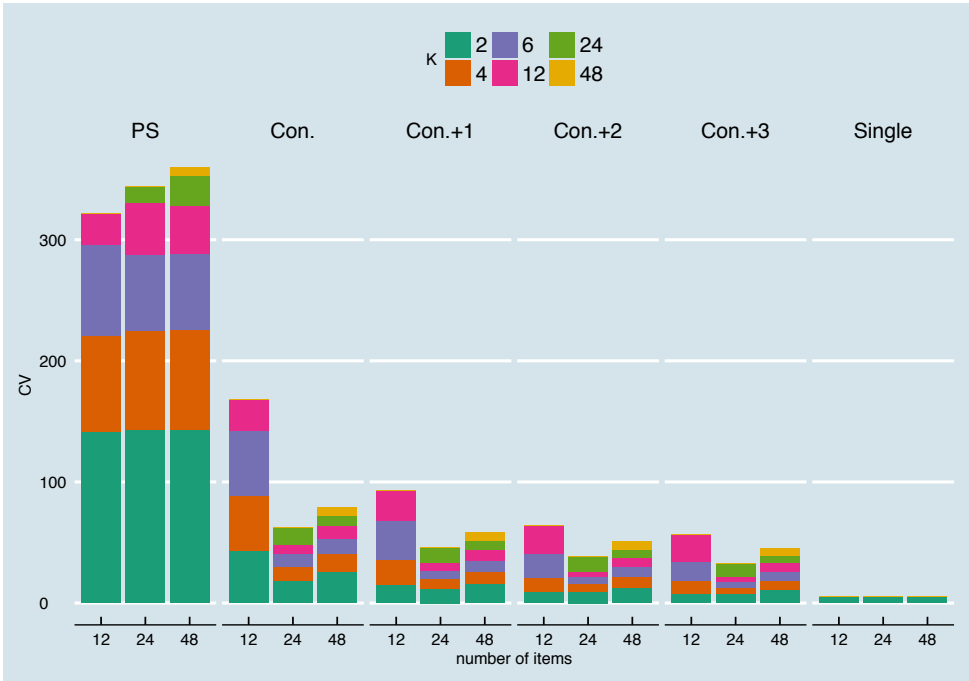


(b) Based on rounded and truncated parallel test scores

Coefficient of variation, after 10,000 test takes



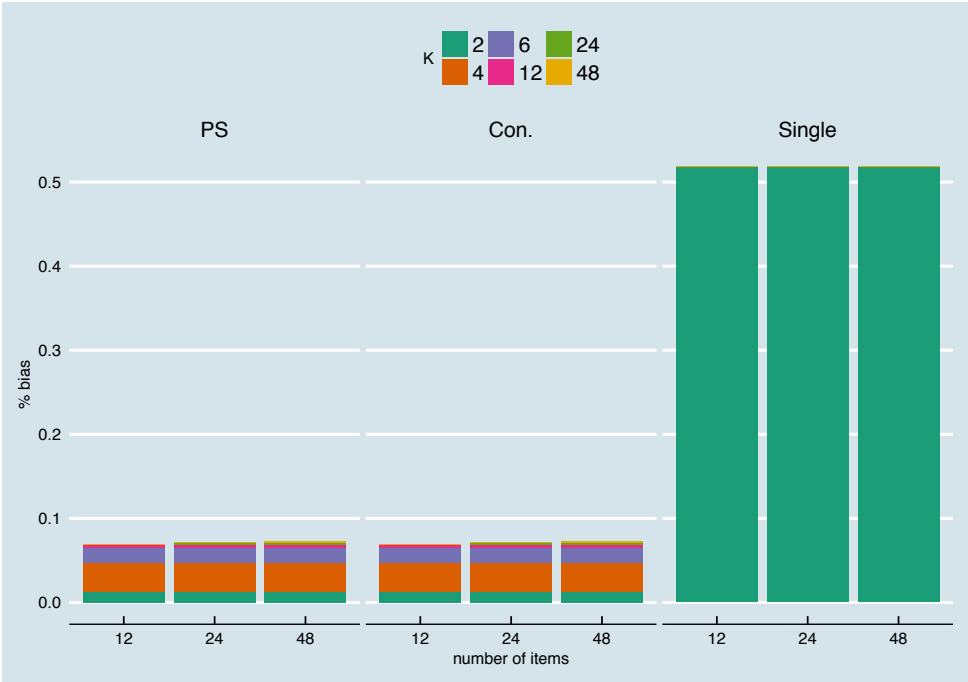
(a) Based on continuous parallel test scores



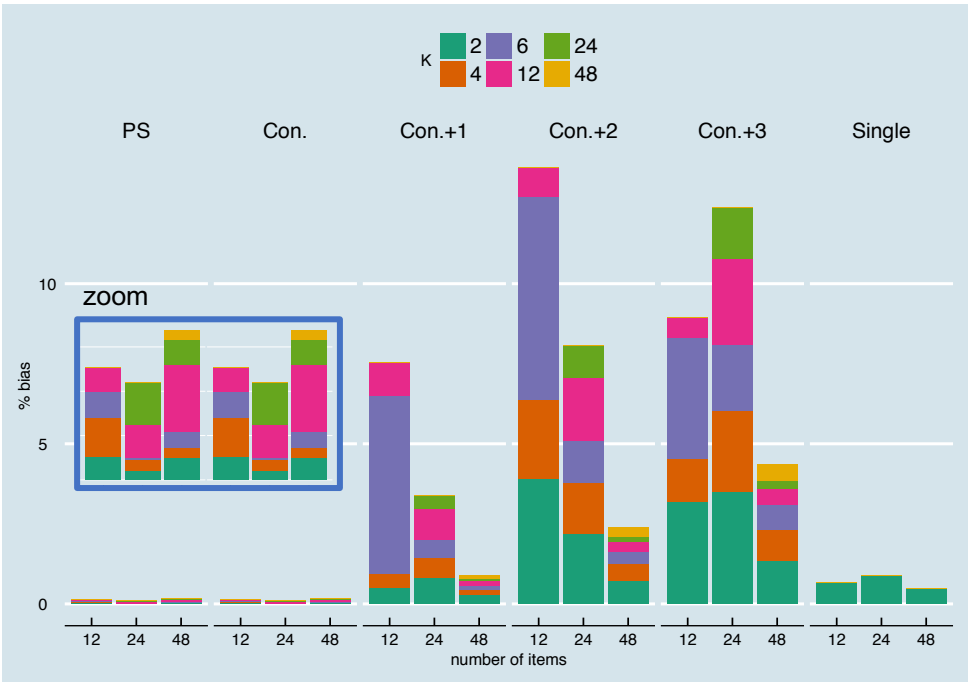
(b) Based on rounded and truncated parallel test scores



% bias, after 10,000 test takes

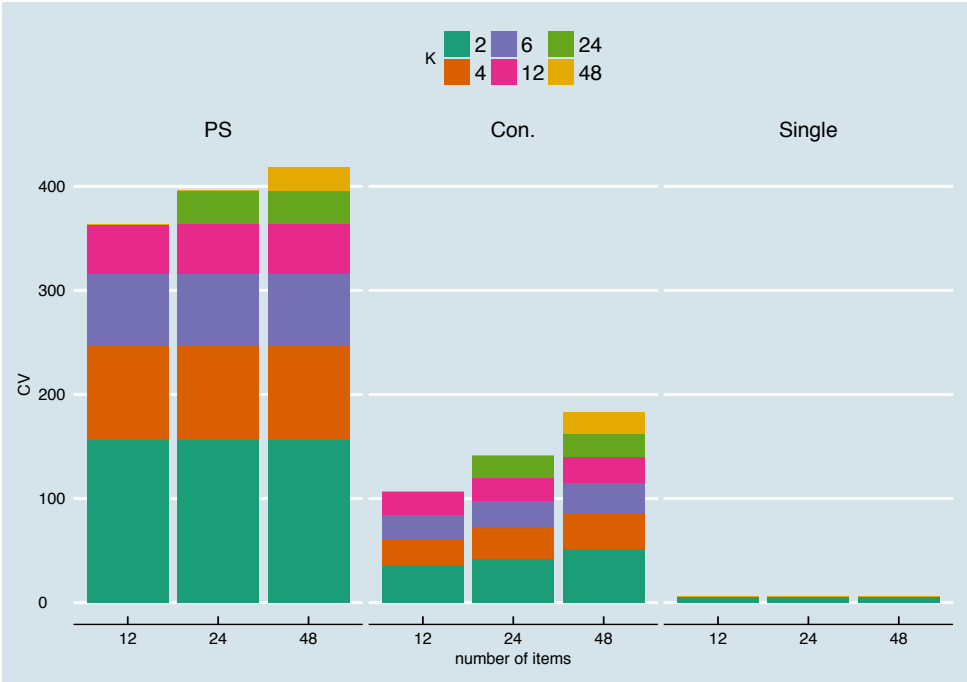


(a) Based on continuous parallel test scores

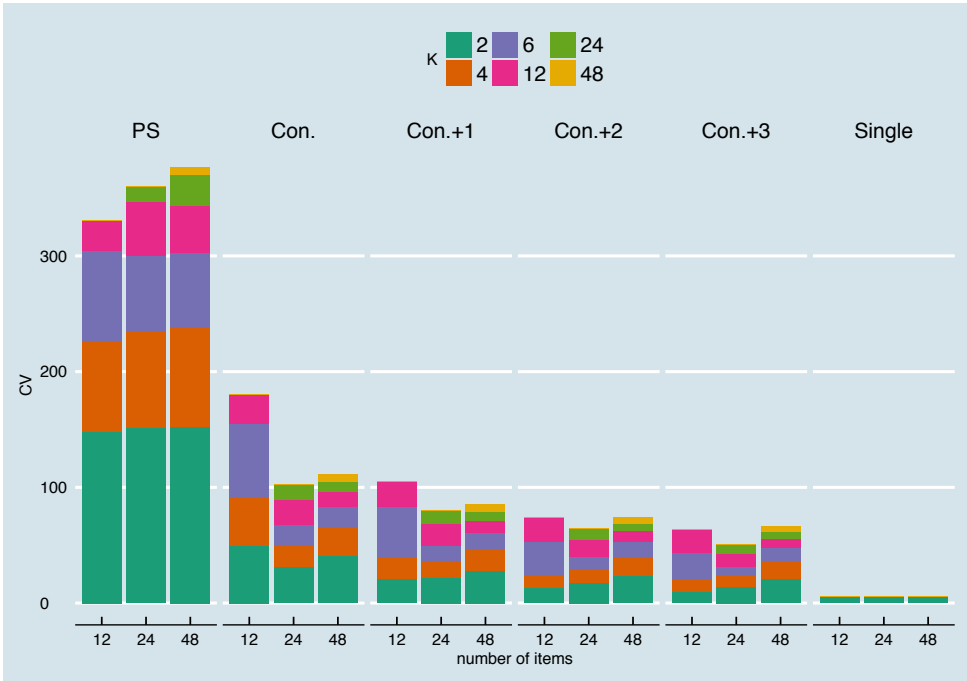


(b) Based on rounded and truncated parallel test scores

Coefficient of variation, after 10,000 test takes



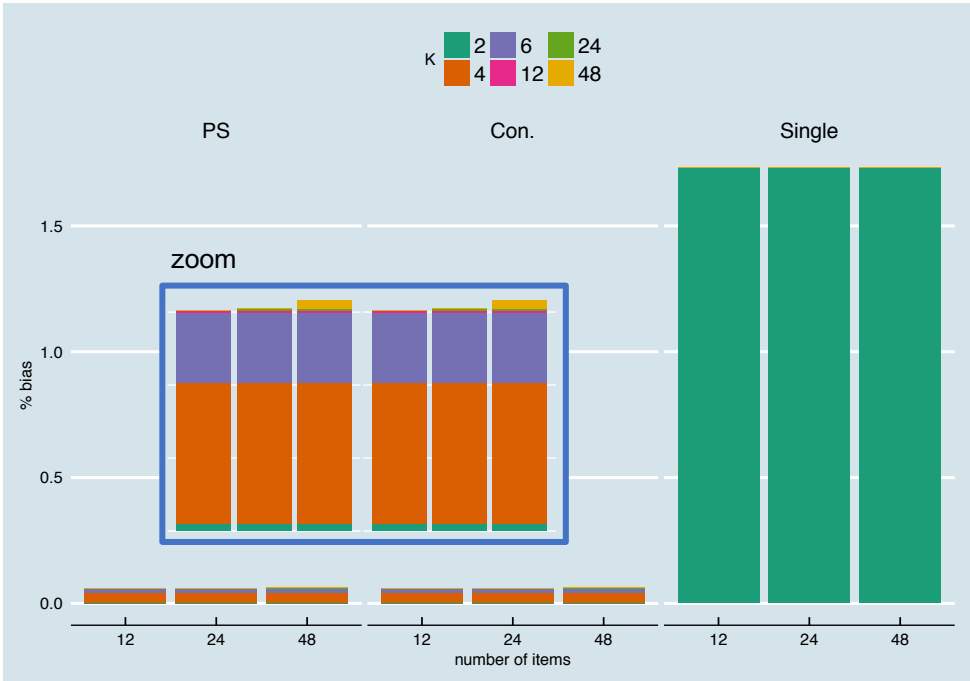
(a) Based on continuous parallel test scores



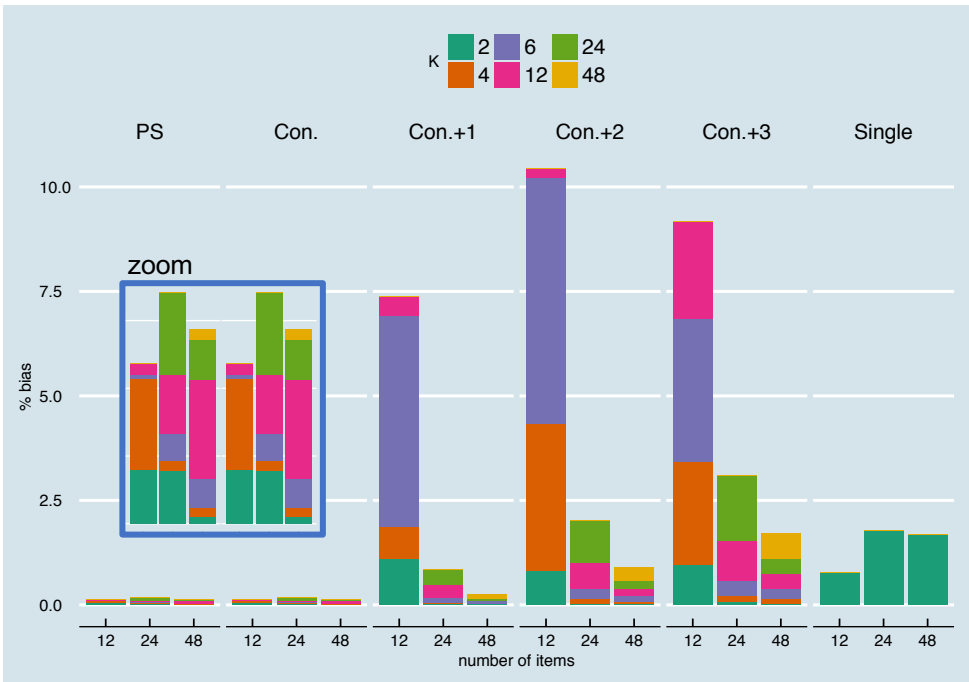
(b) Based on rounded and truncated parallel test scores



% bias, after 10,000 test takes

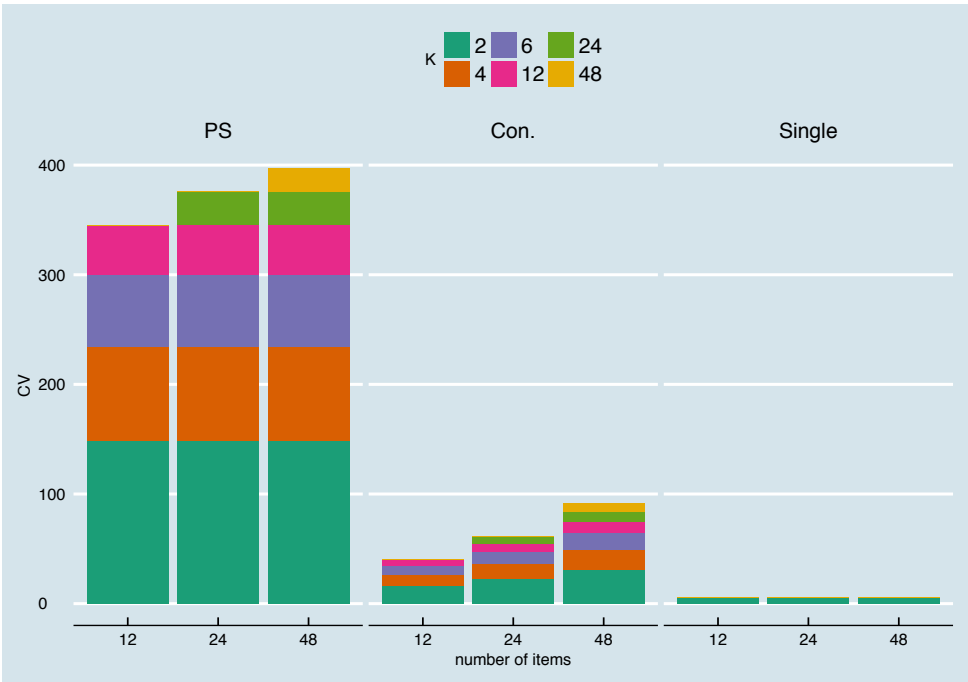


(a) Based on continuous parallel test scores

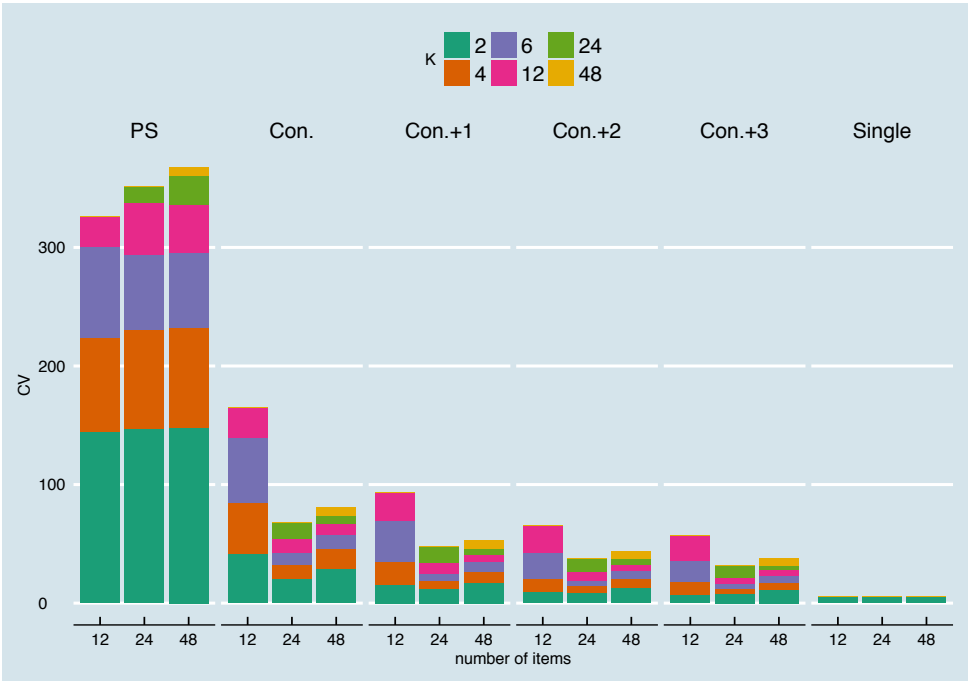


(b) Based on rounded and truncated parallel test scores

Coefficient of variation, after 10,000 test takes



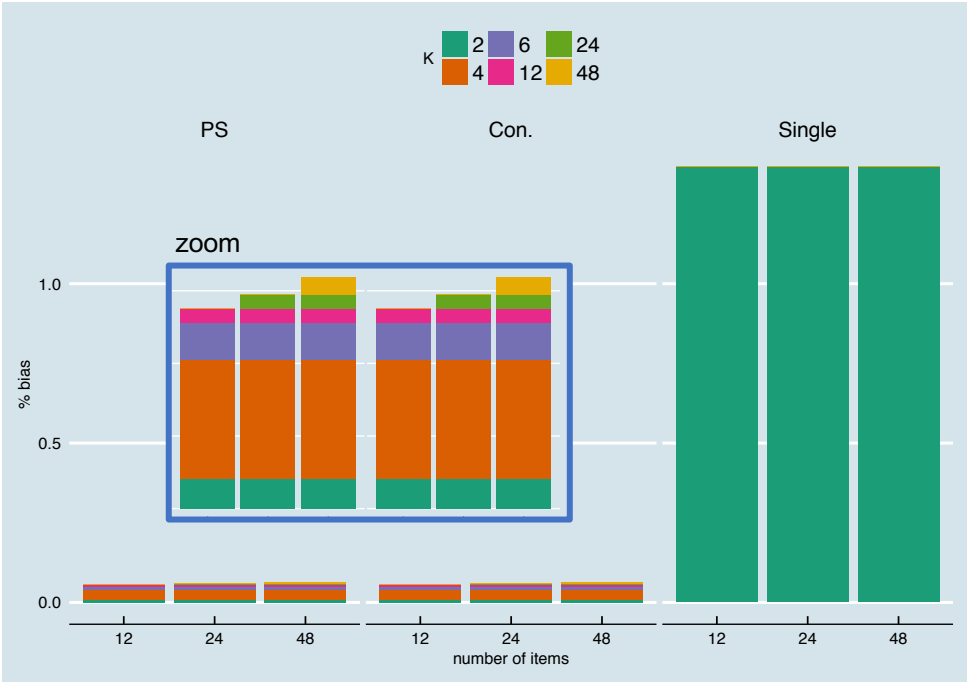
(a) Based on continuous parallel test scores



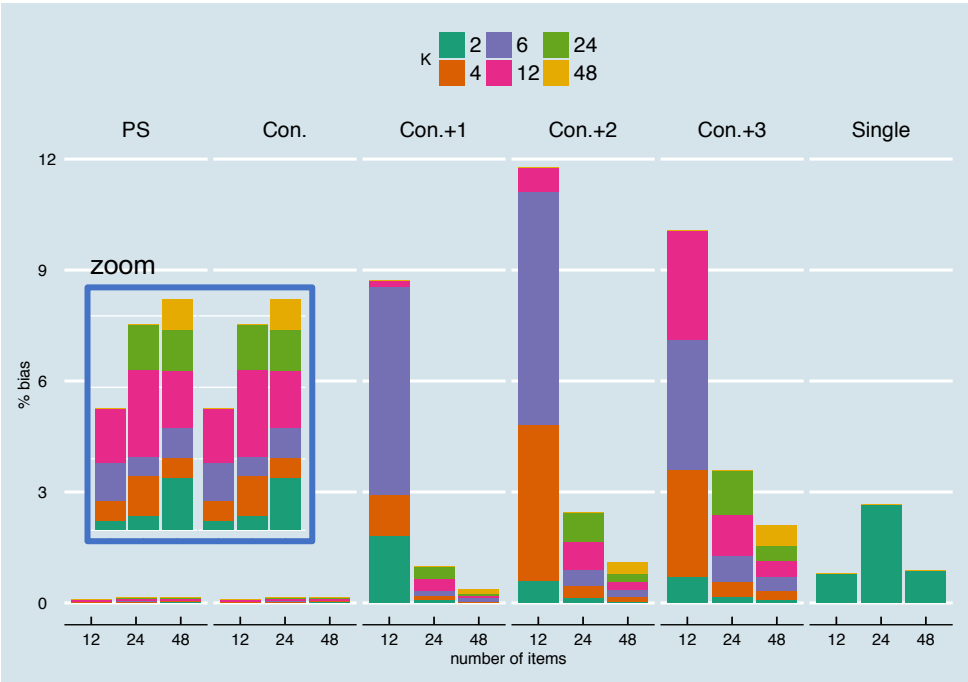
(b) Based on rounded and truncated parallel test scores



% bias, after 10,000 test takes

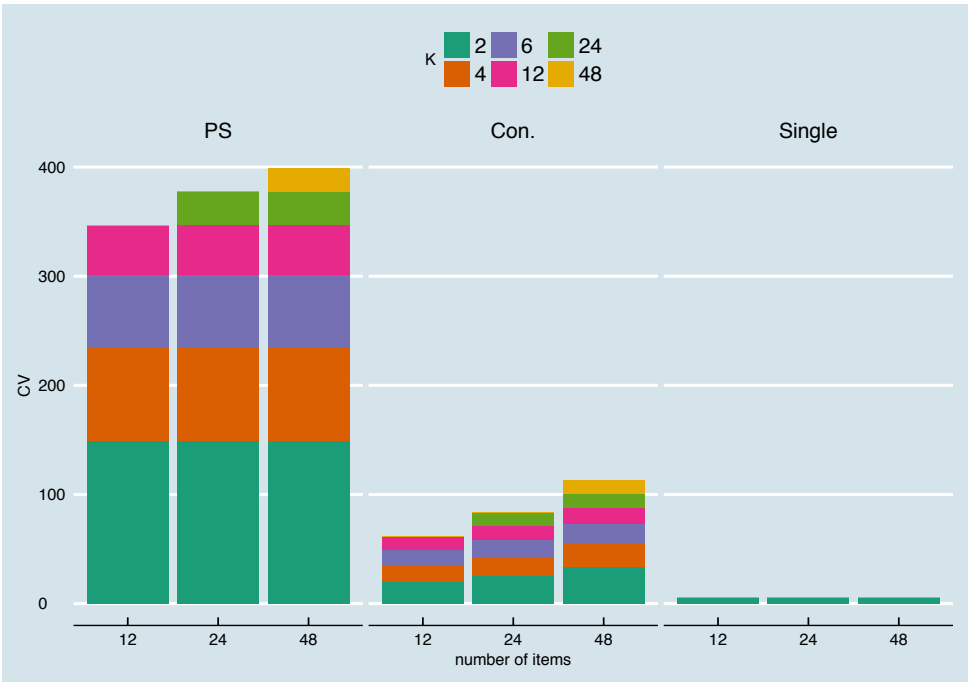


(a) Based on continuous parallel test scores

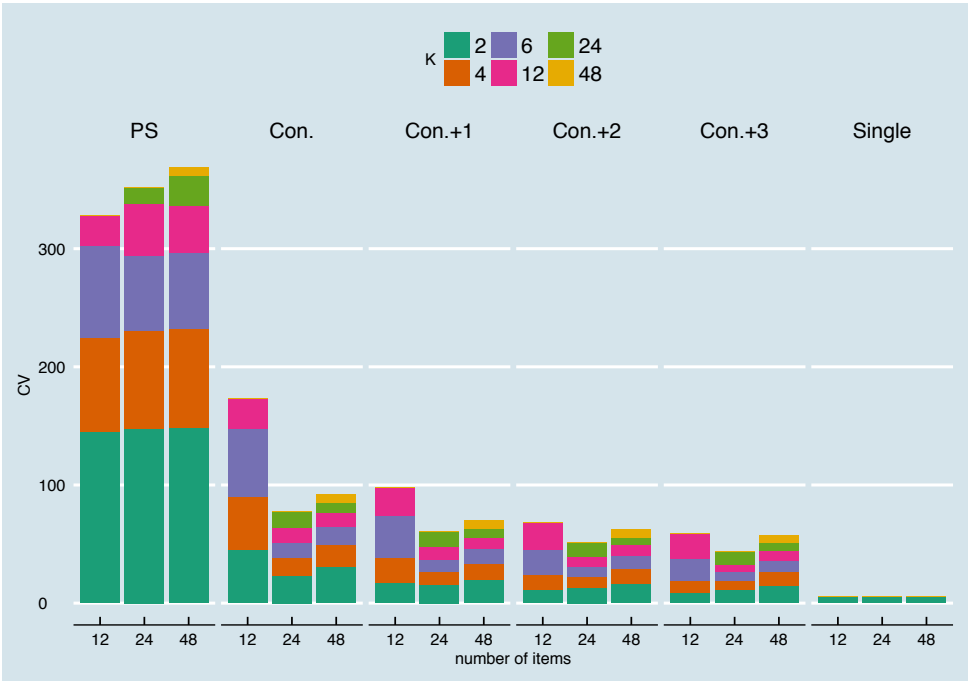


(b) Based on rounded and truncated parallel test scores

Coefficient of variation, after 10,000 test takes

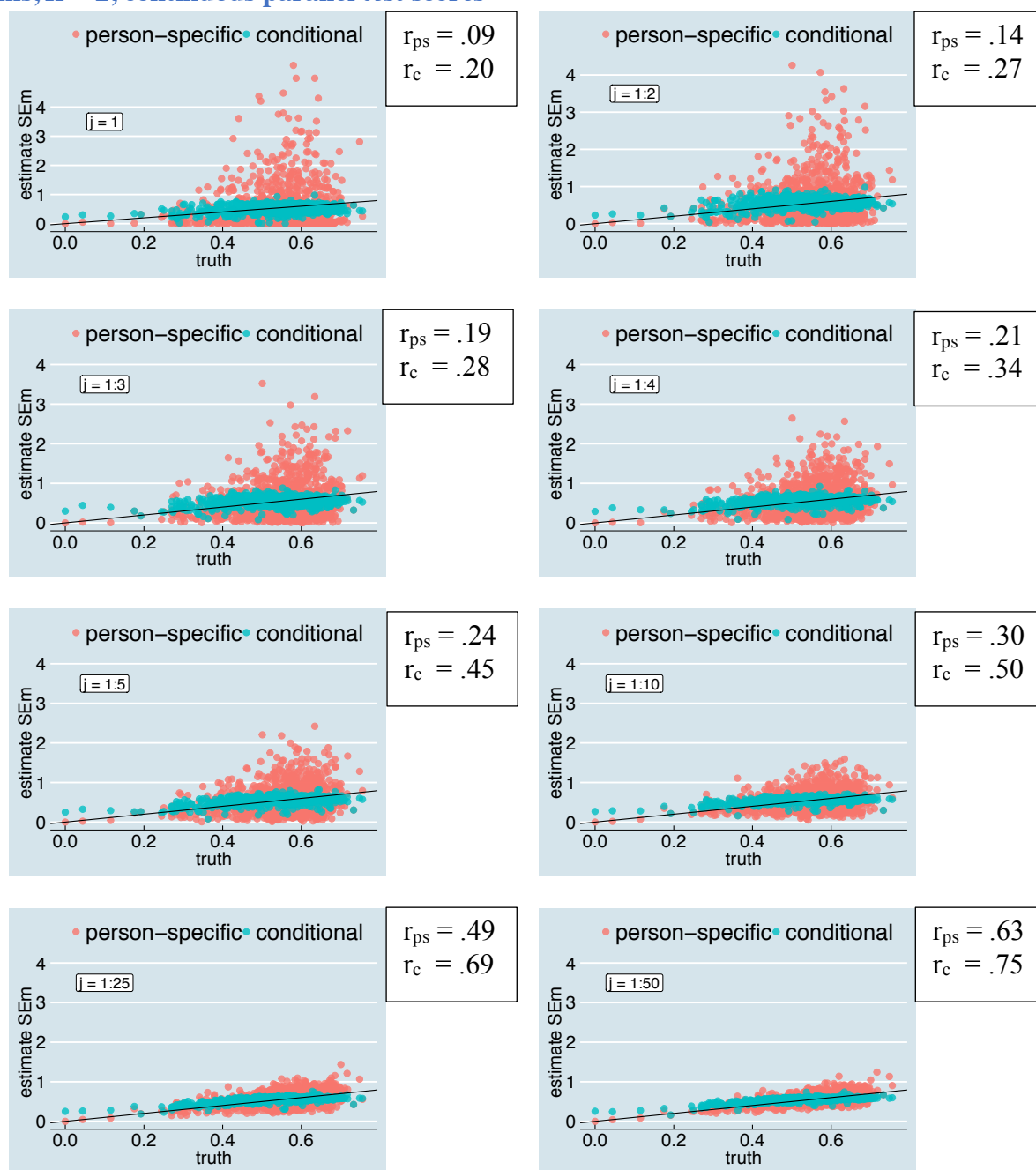


(a) Based on continuous parallel test scores



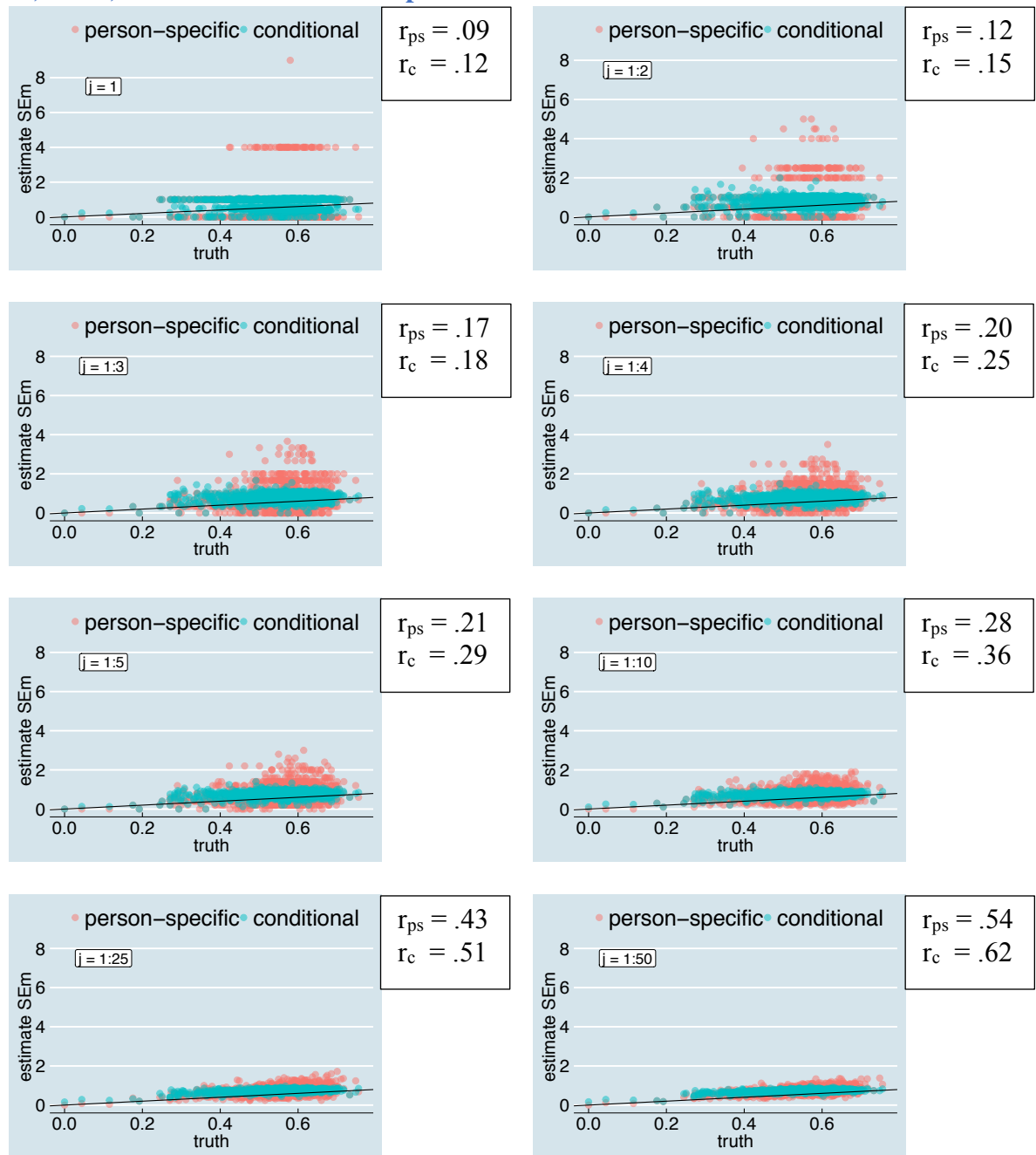
(b) Based on rounded and truncated parallel test scores

Appendix E.

12 items, $K = 2$, continuous parallel test scores

Within standard deviation for truth = .6 vs between standard deviation

J	1	2	3	4	5	10	25	50
Person-specific SEM								
within	.69	.57	.44	.42	.37	.26	.17	.12
between	.74	.60	.49	.41	.37	.26	.18	.15
Conditional SEM								
within	.10	.07	.06	.05	.05	.03	.03	.03
between	.12	.11	.10	.09	.09	.06	.06	.05

12 items, $K = 2$, truncated and rounded parallel test scores

Within standard deviation for truth = .6 vs between standard deviation

J	1	2	3	4	5	10	25	50
Person-specific SEM								
within	.50	.39	.31	.23	.27	.29	.18	.14
between	.98	.76	.62	.52	.47	.34	.23	.18
Conditional SEM								
within	.37	.29	.20	.17	.15	.13	.07	.05
between	.33	.25	.21	.19	.17	.12	.09	.07

Appendix F.

