

5. COMPARATIVE CLASSICAL AND IRT STATS ACROSS YEARS FOR THE COMMON ITEMS USED IN GRADES 3-8

The p -values and IRT difficulty estimates of common items were compared across the two years (2010 and 2011) for Grades 3 to 8 to collect information about how much a possible year-to-year linking common item had changed in consecutive years with regard to item difficulty.

Tables 5.1 to 5.6 provide both the p -values and the Rasch difficulties of the common items across the two years of administration for Grades 3-8. Figures 5.1, 5.3, 5.5, 5.7, 5.9 and 5.11 graphically display the shifts in p -values for the common items across the two years for each of the six grades. Figures 5.2, 5.4, 5.6, 5.8, and 5.12 display the same for the Rasch item difficulty parameters prior to placing them on the common scale.

Table 5.1. P-Value and Unequated Rasch Difficulty Comparisons of Core Linking Items Year 2010 with Year 2011: Grade 3

| Item No. | Item UIN | P-Value 2010 | P-Value 2011 | Difference in P-Values | Rasch Difficulty 2010 | Rasch Difficulty 2011 |
|------------|--------------|--------------|--------------|------------------------|-----------------------|-----------------------|
| 1 | 100000197601 | 0.77 | 0.81 | -0.04 | -1.3233 | -1.3521 |
| 2 | 100000197667 | 0.37 | 0.45 | -0.08 | 0.5960 | 0.4753 |
| 3 | 100000197668 | 0.46 | 0.46 | 0.00 | 0.1965 | 0.4159 |
| 4 | 100000197669 | 0.33 | 0.40 | -0.07 | 0.7786 | 0.7115 |
| 5 | 100000197723 | 0.54 | 0.55 | -0.01 | -0.1630 | 0.0038 |
| 6 | 100000197780 | 0.46 | 0.52 | -0.06 | 0.1898 | 0.1804 |
| 7 | 100000197752 | 0.41 | 0.37 | 0.04 | 0.4000 | 0.8362 |
| 8 | 100000197753 | 0.31 | 0.30 | 0.01 | 0.8929 | 1.1973 |
| 9 | 100000197754 | 0.27 | 0.27 | 0.00 | 1.1103 | 1.3476 |
| 10 | 100000098444 | 0.36 | 0.37 | -0.01 | 0.6680 | 0.8534 |
| 11 | 100000185378 | 0.69 | 0.76 | -0.07 | -0.8620 | -1.0387 |
| 12 | 100000098449 | 0.63 | 0.63 | 0.00 | -0.5641 | -0.3645 |
| 13 | 100000197602 | 0.52 | 0.56 | -0.04 | -0.0632 | -0.0285 |
| 14 | 100000197621 | 0.61 | 0.59 | 0.02 | -0.4876 | -0.1533 |
| 15 | 100000197756 | 0.64 | 0.66 | -0.02 | -0.6348 | -0.4677 |
| 16 | 100000098446 | 0.33 | 0.33 | 0.00 | 0.7786 | 1.0727 |
| 17 | 100000098527 | 0.31 | 0.29 | 0.02 | 0.9162 | 1.2487 |
| 18 | 100000185381 | 0.62 | 0.60 | 0.02 | -0.5153 | -0.1972 |
| 19 | 100000098435 | 0.52 | 0.54 | -0.02 | -0.0964 | 0.0842 |
| 20 | 100000185485 | 0.49 | 0.50 | -0.01 | 0.0763 | 0.2552 |
| 21 | 100000185486 | 0.63 | 0.53 | 0.10 | -0.5641 | 0.1163 |
| 22 | 100000185384 | 0.63 | 0.61 | 0.02 | -0.5711 | -0.2413 |
| 23 | 100000197720 | 0.44 | 0.38 | 0.06 | 0.2841 | 0.8247 |
| 24 | 100000197664 | 0.39 | 0.44 | -0.05 | 0.5251 | 0.5405 |
| 25 | 100000197663 | 0.43 | 0.43 | 0.00 | 0.3452 | 0.5678 |
| Mean Rasch | | | | | -0.0495 | 0.2755 |

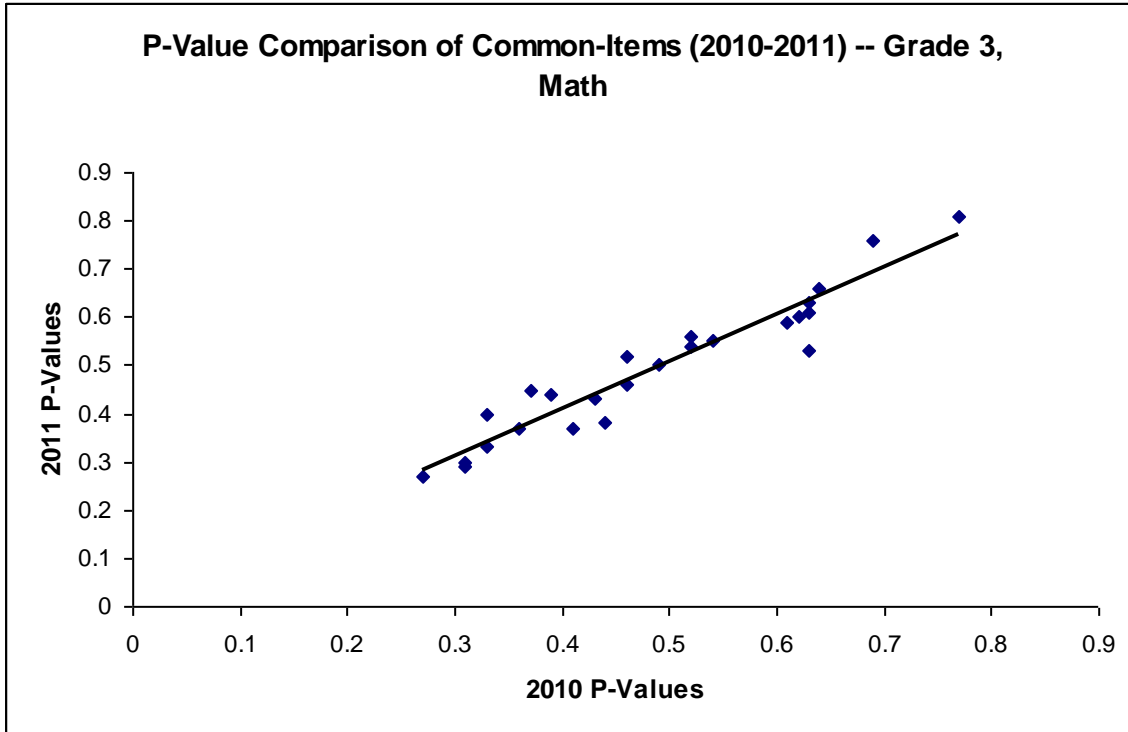


Figure 5. 1. P-values of the common items for Grade 3, years 2010 and 2011

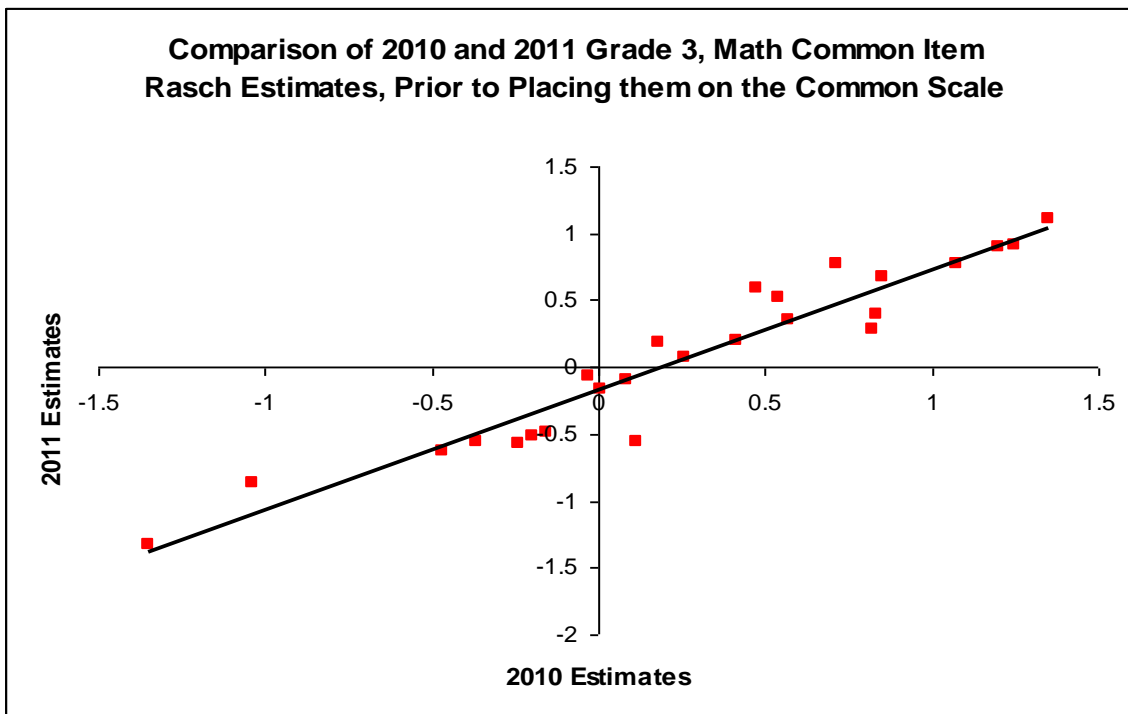


Figure 5.2. Rasch difficulty parameters for the common items, Grade 3, years 2010 and 2011

Table 5.2. P-Value and Unequated Rasch Difficulty Comparisons of Core Linking Items Year 2010 with Year 2011: Grade 4

| Item No. | Item UIN | P-Value 2010 | P-Value 2011 | Difference in P-Values | Rasch Difficulty 2010 | Rasch Difficulty 2011 |
|------------|--------------|--------------|--------------|------------------------|-----------------------|-----------------------|
| 1 | 100000198111 | 0.52 | 0.51 | 0.01 | -0.0382 | 0.1860 |
| 2 | 100000198114 | 0.56 | 0.56 | 0.00 | -0.2269 | -0.0041 |
| 3 | 100000198113 | 0.57 | 0.58 | -0.01 | -0.2475 | -0.1110 |
| 4 | 100000098583 | 0.37 | 0.40 | -0.03 | 0.6531 | 0.6943 |
| 5 | 100000098584 | 0.78 | 0.81 | -0.03 | -1.3010 | -1.3102 |
| 6 | 100000198140 | 0.64 | 0.66 | -0.02 | -0.5900 | -0.4659 |
| 7 | 100000198142 | 0.53 | 0.51 | 0.02 | -0.0891 | 0.1930 |
| 8 | 100000198143 | 0.51 | 0.48 | 0.03 | -0.0129 | 0.3299 |
| 9 | 100000198128 | 0.46 | 0.42 | 0.04 | 0.2315 | 0.6179 |
| 10 | 100000198092 | 0.48 | 0.50 | -0.02 | 0.1396 | 0.2386 |
| 11 | 100000198099 | 0.58 | 0.60 | -0.02 | -0.2939 | -0.1830 |
| 12 | 100000098587 | 0.42 | 0.40 | 0.02 | 0.3864 | 0.7126 |
| 13 | 100000198107 | 0.53 | 0.51 | 0.02 | -0.1043 | 0.2036 |
| 14 | 100000198148 | 0.47 | 0.41 | 0.06 | 0.1701 | 0.6360 |
| 15 | 100000198129 | 0.53 | 0.56 | -0.03 | -0.0789 | -0.0183 |
| 16 | 100000198131 | 0.34 | 0.42 | -0.08 | 0.7643 | 0.6179 |
| 17 | 100000198132 | 0.40 | 0.46 | -0.06 | 0.5074 | 0.4463 |
| 18 | 100000198100 | 0.49 | 0.52 | -0.03 | 0.1141 | 0.1650 |
| 19 | 100000198101 | 0.39 | 0.39 | 0.00 | 0.5609 | 0.7421 |
| 20 | 100000198102 | 0.48 | 0.50 | -0.02 | 0.1345 | 0.2386 |
| 21 | 100000198103 | 0.51 | 0.52 | -0.01 | 0.0125 | 0.1615 |
| 22 | 100000198139 | 0.42 | 0.45 | -0.03 | 0.423 | 0.4853 |
| 23 | 100000098582 | 0.52 | 0.55 | -0.03 | -0.0484 | 0.0171 |
| 24 | 100000198150 | 0.70 | 0.65 | 0.05 | -0.8961 | -0.4048 |
| 25 | 100000186573 | 0.36 | 0.33 | 0.03 | 0.6917 | 1.0523 |
| 26 | 100000186574 | 0.49 | 0.50 | -0.01 | 0.0887 | 0.2597 |
| 27 | 100000186575 | 0.49 | 0.47 | 0.02 | 0.0887 | 0.3792 |
| 28 | 100000098645 | 0.44 | 0.44 | 0.00 | 0.3189 | 0.5138 |
| 29 | 100000186578 | 0.73 | 0.72 | 0.01 | -1.0551 | -0.7889 |
| 30 | 100000186580 | 0.63 | 0.62 | 0.01 | -0.5198 | -0.2706 |
| 31 | 100000198157 | 0.32 | 0.30 | 0.02 | 0.8908 | 1.1745 |
| 32 | 100000198127 | 0.55 | 0.59 | -0.04 | -0.1808 | -0.1650 |
| Mean Rasch | | | | | 0.0636 | 0.1614 |

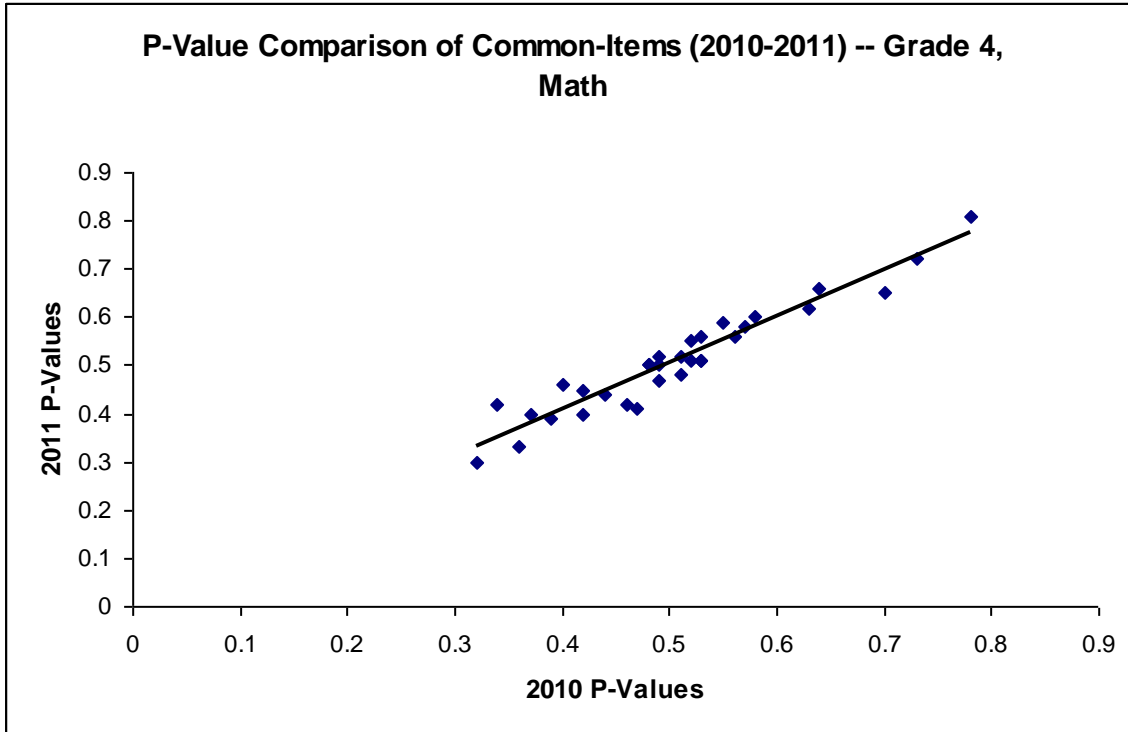


Figure 5.3. P-values of the common items for Grade 4, years 2010 and 2011

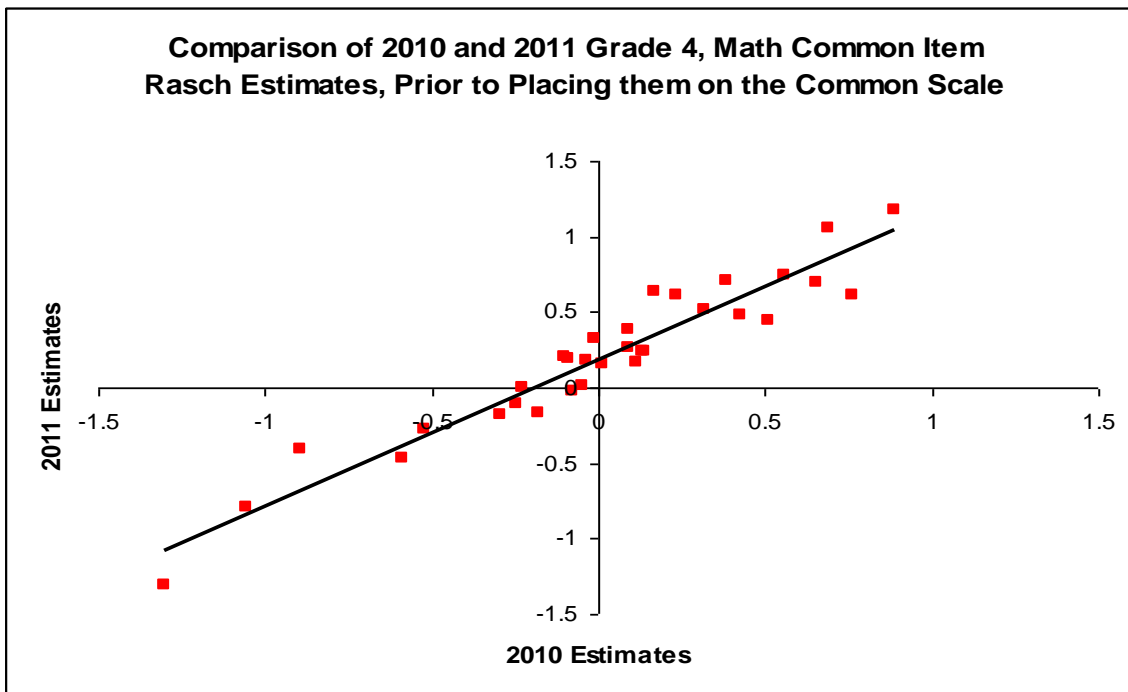


Figure 5.4. Rasch difficulty parameters for the common items, Grade 4, years 2010 and 2011

Table 5.3. P-Value and Unequated Rasch Difficulty Comparisons of Core Linking Items Year 2010 with Year 2011: Grade 5

| Item No. | Item UIN | P-Value 2010 | P-Value 2011 | Difference in P-Values | Rasch Difficulty 2010 | Rasch Difficulty 2011 |
|------------|--------------|--------------|--------------|------------------------|-----------------------|-----------------------|
| 1 | 100000099080 | 0.64 | 0.65 | -0.01 | -0.7302 | -0.4440 |
| 2 | 100000196233 | 0.65 | 0.69 | -0.04 | -0.7706 | -0.5970 |
| 3 | 100000196273 | 0.31 | 0.35 | -0.04 | 0.7665 | 0.9161 |
| 4 | 100000196043 | 0.43 | 0.45 | -0.02 | 0.2106 | 0.4805 |
| 5 | 100000196045 | 0.52 | 0.57 | -0.05 | -0.1950 | -0.0379 |
| 6 | 100000099075 | 0.53 | 0.54 | -0.01 | -0.2322 | 0.0681 |
| 7 | 100000099086 | 0.62 | 0.62 | 0.00 | -0.6164 | -0.2692 |
| 8 | 100000099079 | 0.63 | 0.66 | -0.03 | -0.6458 | -0.4664 |
| 9 | 100000196244 | 0.20 | 0.20 | 0.00 | 1.3858 | 1.7532 |
| 10 | 100000196281 | 0.41 | 0.45 | -0.04 | 0.2916 | 0.4923 |
| 11 | 100000187380 | 0.39 | 0.40 | -0.01 | 0.3785 | 0.6835 |
| 12 | 100000099180 | 0.45 | 0.45 | 0.00 | 0.1352 | 0.4776 |
| 13 | 100000099072 | 0.56 | 0.57 | -0.01 | -0.3395 | -0.0705 |
| 14 | 100000187360 | 0.38 | 0.42 | -0.04 | 0.4274 | 0.6053 |
| 15 | 100000187361 | 0.51 | 0.58 | -0.07 | -0.1393 | -0.1032 |
| 16 | 100000196223 | 0.52 | 0.52 | 0.00 | -0.1857 | 0.1559 |
| 17 | 100000187370 | 0.46 | 0.45 | 0.01 | 0.0650 | 0.4805 |
| 18 | 100000187391 | 0.38 | 0.42 | -0.04 | 0.4323 | 0.6172 |
| 19 | 100000187382 | 0.41 | 0.36 | 0.05 | 0.3108 | 0.8592 |
| 20 | 100000196263 | 0.67 | 0.67 | 0.00 | -0.8372 | -0.5376 |
| 21 | 100000196238 | 0.38 | 0.39 | -0.01 | 0.4225 | 0.7414 |
| 22 | 100000196247 | 0.41 | 0.50 | -0.09 | 0.2964 | 0.2492 |
| 23 | 100000196079 | 0.40 | 0.48 | -0.08 | 0.3445 | 0.3338 |
| 24 | 100000187366 | 0.45 | 0.41 | 0.04 | 0.1258 | 0.6714 |
| 25 | 100000196042 | 0.40 | 0.38 | 0.02 | 0.3639 | 0.7721 |
| Mean Rasch | | | | | -0.1367 | 0.3133 |

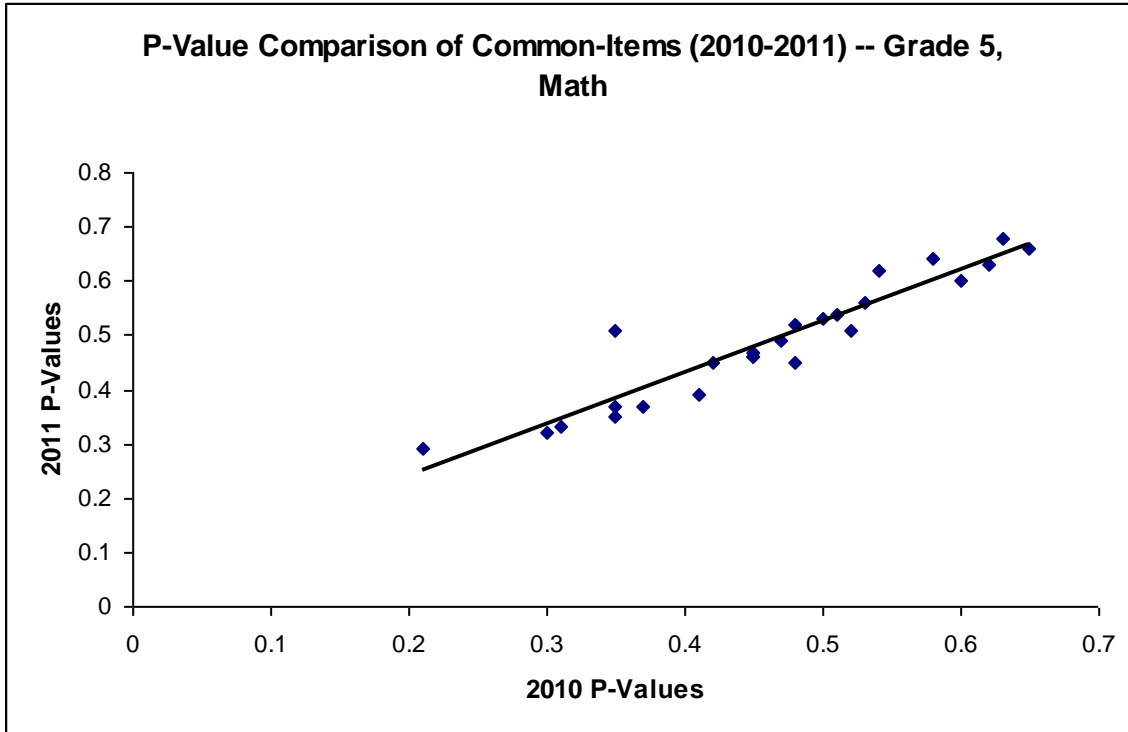


Figure 5.5. P-values of the common items for Grade 5, years 2010 and 2011

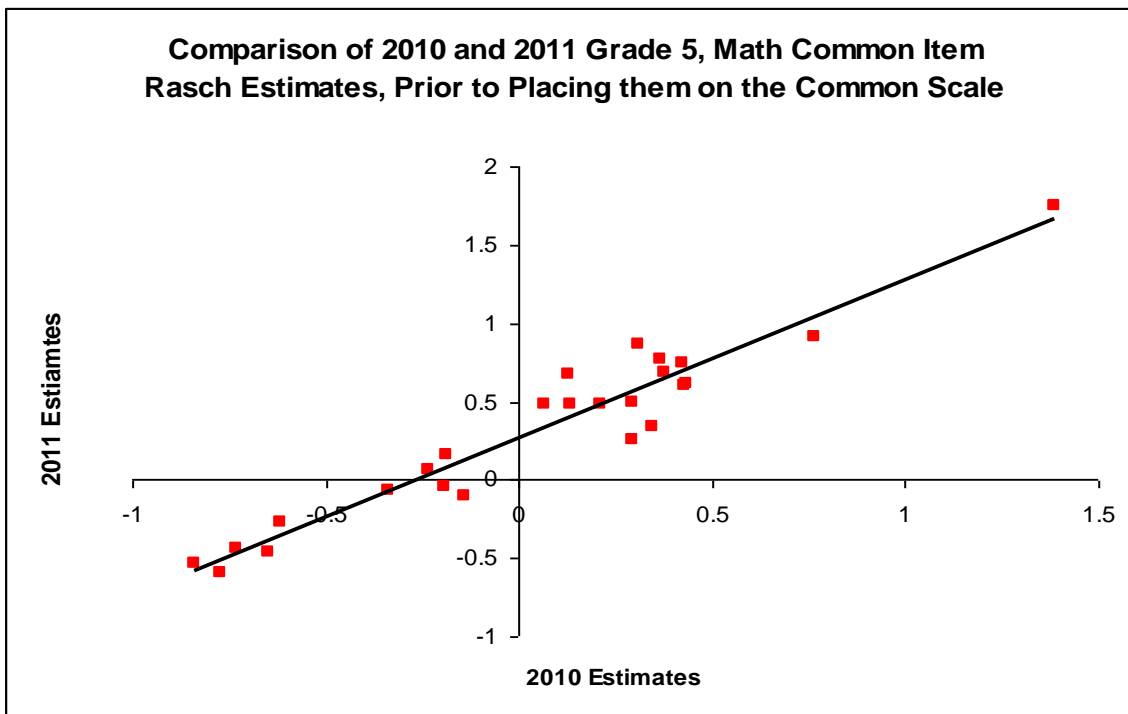


Figure 5.6. Rasch difficulty parameters for the common items, Grade 5, years 2010 and 2011

Table 5.4. P-Value and Unequated Rasch Difficulty Comparisons of Core Linking Items Year 2010 with Year 2011: Grade 6

| Item No. | Item UIN | P-Value 2010 | P-Value 2011 | Difference in P-Values | Rasch Difficulty 2010 | Rasch Difficulty 2011 |
|------------|--------------|--------------|--------------|------------------------|-----------------------|-----------------------|
| 1 | 100000198190 | 0.52 | 0.51 | 0.01 | -0.2157 | -0.0618 |
| 2 | 100000198193 | 0.35 | 0.35 | 0.00 | 0.5096 | 0.6655 |
| 3 | 100000198194 | 0.48 | 0.52 | -0.04 | -0.0444 | -0.1013 |
| 4 | 100000273844 | 0.50 | 0.53 | -0.03 | -0.0670 | -0.1352 |
| 5 | 100000273626 | 0.31 | 0.33 | -0.02 | 0.7857 | 0.7982 |
| 6 | 100000272143 | 0.54 | 0.62 | -0.08 | -0.2713 | -0.5324 |
| 7 | 100000272144 | 0.45 | 0.46 | -0.01 | 0.1331 | 0.1730 |
| 8 | 100000198210 | 0.35 | 0.37 | -0.02 | 0.3908 | 0.5826 |
| 9 | 100000198211 | 0.51 | 0.54 | -0.03 | -0.1220 | -0.1692 |
| 10 | 100000198212 | 0.63 | 0.68 | -0.05 | -0.8737 | -0.8423 |
| 11 | 100000272095 | 0.21 | 0.29 | -0.08 | 1.3776 | 0.9912 |
| 12 | 100000198163 | 0.45 | 0.47 | -0.02 | 0.0761 | 0.1446 |
| 13 | 100000198235 | 0.48 | 0.45 | 0.03 | 0.1385 | 0.2130 |
| 14 | 100000272100 | 0.30 | 0.32 | -0.02 | 0.8584 | 0.8339 |
| 15 | 100000198171 | 0.47 | 0.49 | -0.02 | -0.0087 | 0.0596 |
| 16 | 100000099232 | 0.60 | 0.60 | 0.00 | -0.4626 | -0.4384 |
| 17 | 100000272069 | 0.58 | 0.64 | -0.06 | -0.4469 | -0.6250 |
| 18 | 100000272073 | 0.53 | 0.56 | -0.03 | -0.2201 | -0.2487 |
| 19 | 100000099249 | 0.42 | 0.45 | -0.03 | 0.2281 | 0.2330 |
| 20 | 100000272111 | 0.35 | 0.51 | -0.16 | 0.5886 | -0.0562 |
| 21 | 100000272113 | 0.41 | 0.39 | 0.02 | 0.3055 | 0.5043 |
| 22 | 100000272115 | 0.37 | 0.37 | 0.00 | 0.4885 | 0.5826 |
| 23 | 100000272125 | 0.45 | 0.46 | -0.01 | 0.1486 | 0.1901 |
| 24 | 100000272134 | 0.65 | 0.66 | -0.01 | -0.7465 | -0.7073 |
| 25 | 100000272127 | 0.62 | 0.63 | -0.01 | -0.6267 | -0.5770 |
| 26 | 100000198203 | 0.79 | 0.64 | 0.15 | -1.5757 | -0.6341 |
| 27 | 100000272080 | 0.69 | 0.71 | -0.02 | -0.9511 | -0.9899 |
| 28 | 100000272101 | 0.46 | 0.47 | -0.01 | 0.1022 | 0.1389 |
| 29 | 100000187836 | 0.61 | 0.61 | 0.00 | -0.5550 | -0.4735 |
| 30 | 100000187838 | 0.21 | 0.26 | -0.05 | 1.2892 | 1.1768 |
| 31 | 100000099237 | 0.51 | 0.60 | -0.09 | -0.2028 | -0.4589 |
| 32 | 100000099240 | 0.52 | 0.56 | -0.04 | -0.2125 | -0.2714 |
| 33 | 100000099236 | 0.62 | 0.64 | -0.02 | -0.3322 | -0.6371 |
| 34 | 100000099233 | 0.36 | 0.35 | 0.01 | 0.4638 | 0.6810 |
| 35 | 100000099243 | 0.65 | 0.70 | -0.05 | -0.8347 | -0.9103 |
| 36 | 100000272104 | 0.45 | 0.43 | 0.02 | 0.1538 | 0.3106 |
| 37 | 100000272150 | 0.44 | 0.42 | 0.02 | 0.1902 | 0.3541 |
| 38 | 100000272151 | 0.28 | 0.30 | -0.02 | 0.9585 | 0.9502 |
| 39 | 100000187841 | 0.60 | 0.62 | -0.02 | -0.5203 | -0.5324 |
| 40 | 100000187845 | 0.40 | 0.40 | 0.00 | 0.3020 | 0.4361 |
| 41 | 100000187840 | 0.45 | 0.50 | -0.05 | 0.0794 | 0.0059 |
| 42 | 100000198208 | 0.50 | 0.52 | -0.02 | -0.1640 | -0.1070 |
| 43 | 100000198202 | 0.62 | 0.67 | -0.05 | -0.4955 | -0.7946 |
| 44 | 100000198229 | 0.30 | 0.29 | 0.01 | 0.7870 | 0.9706 |
| 45 | 100000099312 | 0.57 | 0.68 | -0.11 | -0.4659 | -0.8391 |
| 46 | 100000099315 | 0.63 | 0.66 | -0.03 | -0.7202 | -0.7166 |
| 47 | 100000187851 | 0.34 | 0.36 | -0.02 | 0.5886 | 0.6562 |
| 48 | 100000099313 | 0.39 | 0.40 | -0.01 | 0.3633 | 0.4243 |
| 49 | 100000272160 | 0.69 | 0.71 | -0.02 | -0.2157 | -0.9631 |
| 50 | 100000272164 | 0.34 | 0.33 | 0.01 | 0.5096 | 0.7725 |
| 51 | 100000187850 | 0.66 | 0.67 | -0.01 | -0.0444 | -0.7570 |
| Mean Rasch | | | | | -0.1367 | -0.0143 |

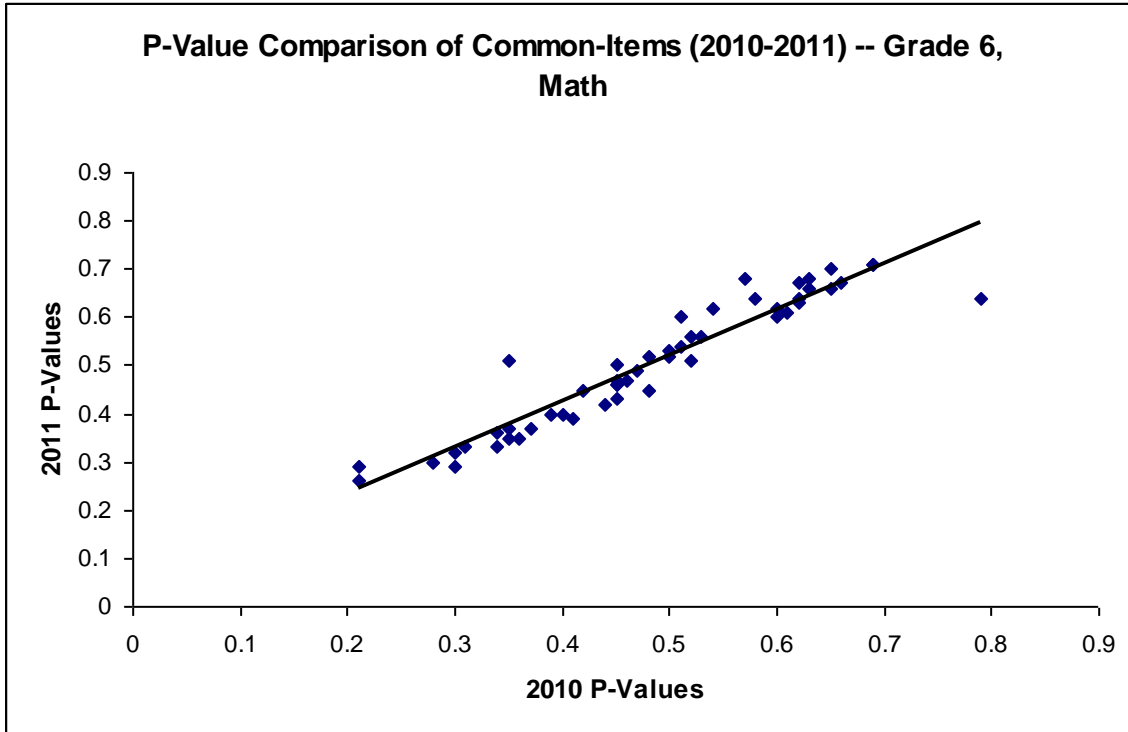


Figure 5.7. P-values of the common items for Grade 6, years 2010 and 2011

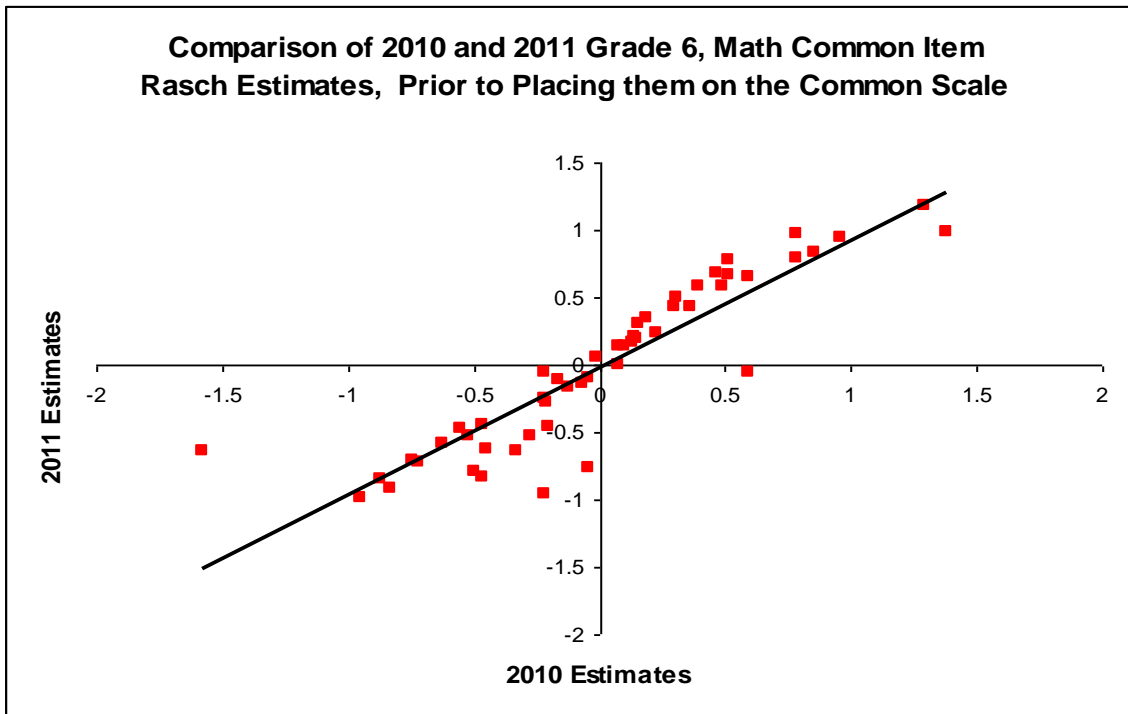


Figure 5.8. Rasch difficulty parameters for the common items, Grade 6, years 2010 and 2011

Table 5.5. P-Value and Unequated Rasch Difficulty Comparisons of Core Linking Items Year 2010 with Year 2011: Grade 7

| Item No. | Item UIN | P-Value 2010 | P-Value 2011 | Difference in P-Values | Rasch Difficulty 2010 | Rasch Difficulty 2011 |
|------------|--------------|--------------|--------------|------------------------|-----------------------|-----------------------|
| 1 | 100000272271 | 0.37 | 0.38 | -0.01 | 0.4679 | 0.4138 |
| 2 | 100000272216 | 0.43 | 0.44 | -0.01 | 0.2305 | 0.1155 |
| 3 | 100000272272 | 0.47 | 0.50 | -0.03 | 0.0392 | -0.1200 |
| 4 | 100000099396 | 0.62 | 0.72 | -0.10 | -0.6026 | -1.1295 |
| 5 | 100000197492 | 0.51 | 0.56 | -0.05 | -0.1363 | -0.3755 |
| 6 | 100000197535 | 0.19 | 0.16 | 0.03 | 1.4979 | 1.6263 |
| 7 | 100000197499 | 0.59 | 0.64 | -0.05 | -0.4387 | -0.7241 |
| 8 | 100000197462 | 0.54 | 0.45 | 0.09 | -0.2455 | 0.0691 |
| 9 | 100000197517 | 0.41 | 0.42 | -0.01 | 0.2827 | 0.2064 |
| 10 | 100000099500 | 0.67 | 0.71 | -0.04 | -0.8352 | -1.0925 |
| 11 | 100000322140 | 0.58 | 0.60 | -0.02 | -0.4140 | -0.5472 |
| 12 | 100000322141 | 0.54 | 0.55 | -0.01 | -0.2533 | -0.3446 |
| 13 | 100000322154 | 0.62 | 0.65 | -0.03 | -0.5872 | -0.7708 |
| 14 | 100000322138 | 0.26 | 0.24 | 0.02 | 1.0143 | 1.1055 |
| 15 | 100000197496 | 0.21 | 0.17 | 0.04 | 1.4407 | 1.5716 |
| 16 | 100000273415 | 0.29 | 0.29 | 0.00 | 0.8860 | 0.8404 |
| 17 | 100000273416 | 0.17 | 0.16 | 0.01 | 1.6088 | 1.5942 |
| 18 | 100000272274 | 0.41 | 0.41 | 0.00 | 0.2878 | 0.2404 |
| 19 | 100000197474 | 0.43 | 0.56 | -0.13 | 0.1987 | -0.3806 |
| 20 | 100000207723 | 0.34 | 0.39 | -0.05 | 0.6302 | 0.3438 |
| 21 | 100000196041 | 0.59 | 0.66 | -0.07 | -0.4751 | -0.8377 |
| 22 | 100000196044 | 0.52 | 0.57 | -0.05 | -0.1690 | -0.4427 |
| 23 | 100000099411 | 0.42 | 0.39 | 0.03 | 0.2770 | 0.3358 |
| 24 | 100000322164 | 0.55 | 0.53 | 0.02 | -0.2792 | -0.2627 |
| 25 | 100000322165 | 0.43 | 0.41 | 0.02 | 0.2217 | 0.2720 |
| 26 | 100000322175 | 0.57 | 0.57 | 0.00 | -0.4009 | -0.4116 |
| 27 | 100000322169 | 0.33 | 0.34 | -0.01 | 0.6849 | 0.5887 |
| 28 | 100000197458 | 0.38 | 0.39 | -0.01 | 0.4254 | 0.3411 |
| 29 | 100000197482 | 0.46 | 0.47 | -0.01 | 0.1046 | -0.0180 |
| 30 | 100000322129 | 0.62 | 0.65 | -0.03 | -0.6098 | -0.7874 |
| 31 | 100000167833 | 0.55 | 0.60 | -0.05 | -0.2894 | -0.5789 |
| 32 | 100000099408 | 0.33 | 0.36 | -0.03 | 0.6639 | 0.4878 |
| 33 | 100000167834 | 0.33 | 0.38 | -0.05 | 0.6578 | 0.4138 |
| 34 | 100000322171 | 0.48 | 0.41 | 0.07 | -0.0039 | 0.2668 |
| 35 | 100000322163 | 0.46 | 0.48 | -0.02 | 0.0910 | -0.0665 |
| 36 | 100000272247 | 0.68 | 0.69 | -0.01 | -0.9105 | -0.9962 |
| 37 | 100000322148 | 0.61 | 0.57 | 0.04 | -0.5737 | -0.4272 |
| 38 | 100000167820 | 0.36 | 0.40 | -0.04 | 0.5131 | 0.2905 |
| 39 | 100000196095 | 0.53 | 0.50 | 0.03 | -0.2318 | -0.1302 |
| 40 | 100000196092 | 0.33 | 0.34 | -0.01 | 0.6639 | 0.5717 |
| 41 | 100000197500 | 0.55 | 0.53 | 0.02 | -0.3196 | -0.2448 |
| 42 | 100000196099 | 0.38 | 0.36 | 0.02 | 0.4399 | 0.4933 |
| 43 | 100000197524 | 0.19 | 0.20 | -0.01 | 1.6427 | 1.3414 |
| 44 | 100000197526 | 0.40 | 0.37 | 0.03 | 0.3593 | 0.4356 |
| 45 | 100000207733 | 0.63 | 0.61 | 0.02 | -0.6428 | -0.6028 |
| 46 | 100000197511 | 0.74 | 0.75 | -0.01 | -1.2109 | -1.3136 |
| 47 | 100000322146 | 0.33 | 0.38 | -0.05 | 0.6995 | 0.3922 |
| 48 | 100000322147 | 0.49 | 0.52 | -0.03 | -0.0598 | -0.2321 |
| 49 | 100000322150 | 0.50 | 0.46 | 0.04 | -0.0984 | 0.0255 |
| 50 | 100000322157 | 0.75 | 0.76 | -0.01 | -1.2275 | -1.3339 |
| 51 | 100000099393 | 0.73 | 0.75 | -0.02 | -1.1557 | -1.2802 |
| Mean Rasch | | | | | -0.1367 | -0.0209 |

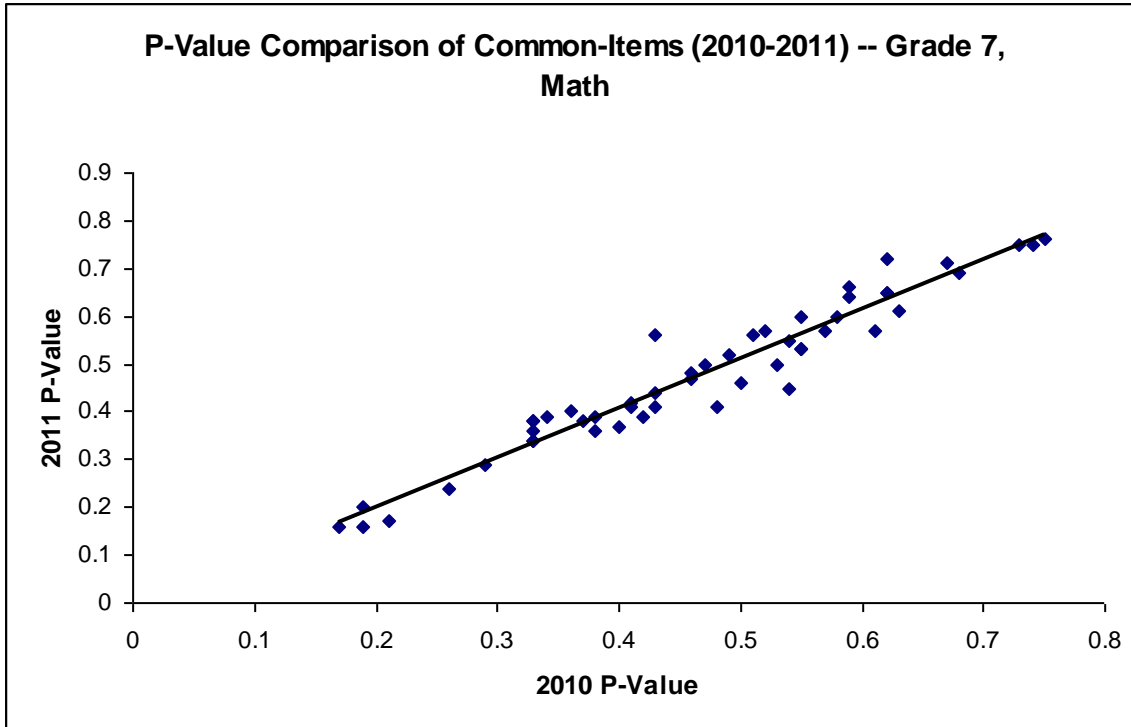


Figure 5.9. P-values of the common items for Grade 7, years 2010 and 2011

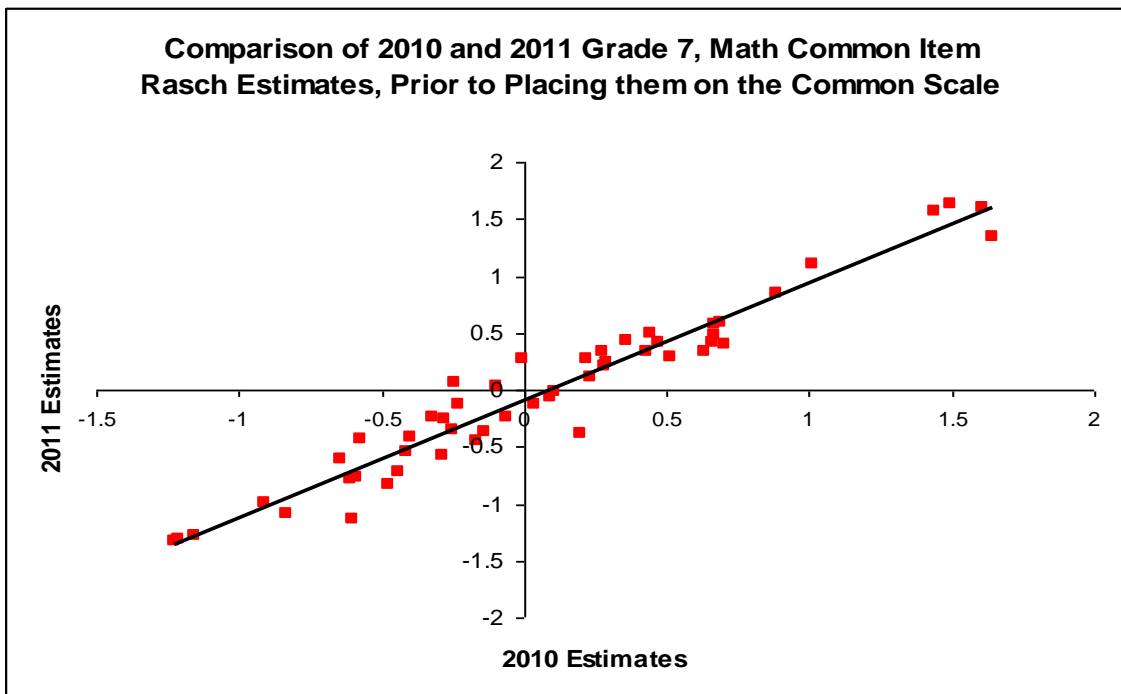


Figure 5.10. Rasch difficulty parameters for the common items, Grade 7, years 2010 and 2011

Table 5.6. P-Value and Unequated Rasch Difficulty Comparisons of Core Linking Items Year 2010 with Year 2011: Grade 8

| Item No. | Item UIN | P-Value 2010 | P-Value 2011 | Difference in P-Values | Rasch Difficulty 2010 | Rasch Difficulty 2011 |
|------------|--------------|--------------|--------------|------------------------|-----------------------|-----------------------|
| 1 | 100000174558 | 0.26 | 0.25 | 0.01 | 0.7327 | 1.0774 |
| 2 | 100000167565 | 0.48 | 0.53 | -0.05 | -0.1516 | -0.2534 |
| 3 | 100000167566 | 0.30 | 0.41 | -0.11 | 0.6133 | 0.2770 |
| 4 | 100000197333 | 0.20 | 0.24 | -0.04 | 1.1330 | 1.1453 |
| 5 | 100000322080 | 0.46 | 0.54 | -0.08 | -0.1259 | -0.2626 |
| 6 | 100000197342 | 0.41 | 0.49 | -0.08 | 0.0370 | -0.0712 |
| 7 | 100000099568 | 0.51 | 0.52 | -0.01 | -0.3874 | -0.2078 |
| 8 | 100000167560 | 0.51 | 0.53 | -0.02 | -0.3897 | -0.2580 |
| 9 | 100000167559 | 0.37 | 0.33 | 0.04 | 0.2072 | 0.6571 |
| 10 | 100000167558 | 0.46 | 0.47 | -0.01 | -0.1654 | 0.0178 |
| 11 | 100000099635 | 0.41 | 0.39 | 0.02 | 0.0630 | 0.3624 |
| 12 | 100000322208 | 0.65 | 0.72 | -0.07 | -0.9425 | -1.1099 |
| 13 | 100000197388 | 0.66 | 0.69 | -0.03 | -1.0311 | -0.9771 |
| 14 | 100000197387 | 0.42 | 0.32 | 0.10 | 0.3845 | 0.6856 |
| 15 | 100000322122 | 0.59 | 0.56 | 0.03 | -0.6724 | -0.3543 |
| 16 | 100000272278 | 0.37 | 0.41 | -0.04 | 0.2661 | 0.2864 |
| 17 | 100000272279 | 0.15 | 0.16 | -0.01 | 1.6028 | 1.6714 |
| 18 | 100000197359 | 0.60 | 0.56 | 0.04 | -0.6919 | -0.3750 |
| 19 | 100000286792 | 0.45 | 0.44 | 0.01 | -0.0663 | 0.1441 |
| 20 | 100000272298 | 0.27 | 0.26 | 0.01 | 0.7941 | 1.0144 |
| 21 | 100000286786 | 0.76 | 0.75 | 0.01 | -1.5026 | -1.2559 |
| 22 | 100000272300 | 0.15 | 0.18 | -0.03 | 1.5778 | 1.5185 |
| 23 | 100000322186 | 0.73 | 0.61 | 0.12 | -1.3614 | -0.5878 |
| 24 | 100000272340 | 0.47 | 0.39 | 0.08 | -0.1682 | 0.3624 |
| 25 | 100000322187 | 0.41 | 0.40 | 0.01 | 0.1063 | 0.3361 |
| 26 | 100000099548 | 0.74 | 0.70 | 0.04 | -1.2618 | -1.0090 |
| 27 | 100000197367 | 0.36 | 0.33 | 0.03 | 0.4466 | 0.6648 |
| 28 | 100000322116 | 0.49 | 0.47 | 0.02 | -0.2568 | 0.0086 |
| 29 | 100000197366 | 0.54 | 0.58 | -0.04 | -0.5180 | -0.4607 |
| 30 | 100000322200 | 0.34 | 0.40 | -0.06 | 0.4181 | 0.3266 |
| 31 | 100000099634 | 0.37 | 0.40 | -0.03 | 0.2121 | 0.3029 |
| 32 | 100000167555 | 0.55 | 0.65 | -0.10 | -0.5479 | -0.7898 |
| 33 | 100000099644 | 0.59 | 0.74 | -0.15 | -0.7201 | -1.2471 |
| 34 | 100000207798 | 0.30 | 0.25 | 0.05 | 0.5557 | 1.0713 |
| 35 | 100000099553 | 0.68 | 0.67 | 0.01 | -0.9660 | -0.8502 |
| 36 | 100000197352 | 0.19 | 0.19 | 0.00 | 1.1799 | 1.4070 |
| 37 | 100000197319 | 0.36 | 0.37 | -0.01 | 0.2761 | 0.4663 |
| 38 | 100000207887 | 0.39 | 0.40 | -0.01 | 0.1250 | 0.3171 |
| 39 | 100000197372 | 0.33 | 0.37 | -0.04 | 0.4154 | 0.4761 |
| 40 | 100000207900 | 0.40 | 0.44 | -0.04 | 0.1154 | 0.1349 |
| 41 | 100000207904 | 0.47 | 0.42 | 0.05 | -0.2159 | 0.2418 |
| 42 | 100000286797 | 0.39 | 0.40 | -0.01 | 0.1722 | 0.3006 |
| 43 | 100000197360 | 0.38 | 0.41 | -0.03 | 0.1804 | 0.2864 |
| 44 | 100000322196 | 0.65 | 0.67 | -0.02 | -0.9562 | -0.8706 |
| 45 | 100000322195 | 0.44 | 0.43 | 0.01 | -0.0150 | 0.2021 |
| 46 | 100000099563 | 0.54 | 0.59 | -0.05 | -0.4927 | -0.5052 |
| 47 | 100000286879 | 0.41 | 0.44 | -0.03 | 0.1150 | 0.1395 |
| 48 | 100000099628 | 0.72 | 0.83 | -0.11 | -1.3142 | -1.7966 |
| 49 | 100000322203 | 0.28 | 0.28 | 0.00 | 0.7198 | 0.9019 |
| 50 | 100000322202 | 0.77 | 0.74 | 0.03 | -1.6002 | -1.2412 |
| 51 | 100000099631 | 0.35 | 0.34 | 0.01 | 0.5341 | 0.5983 |
| Mean Rasch | | | | | -0.1367 | 0.0572 |

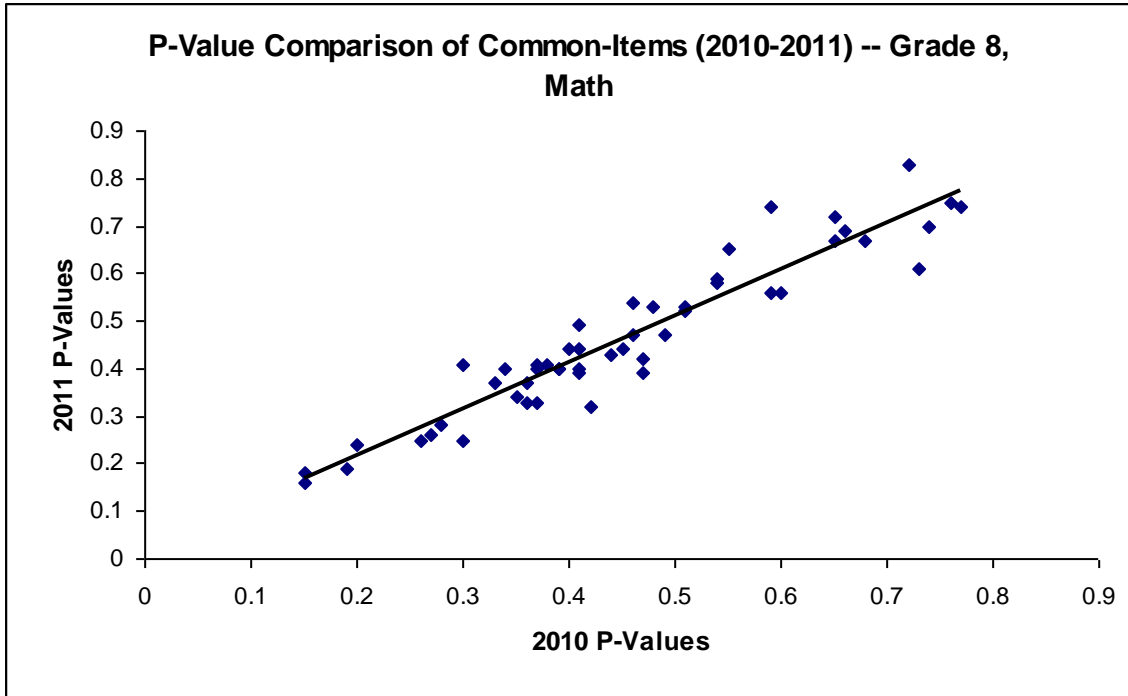


Figure 5.11. P-values of the common items for Grade 8, years 2010 and 2011

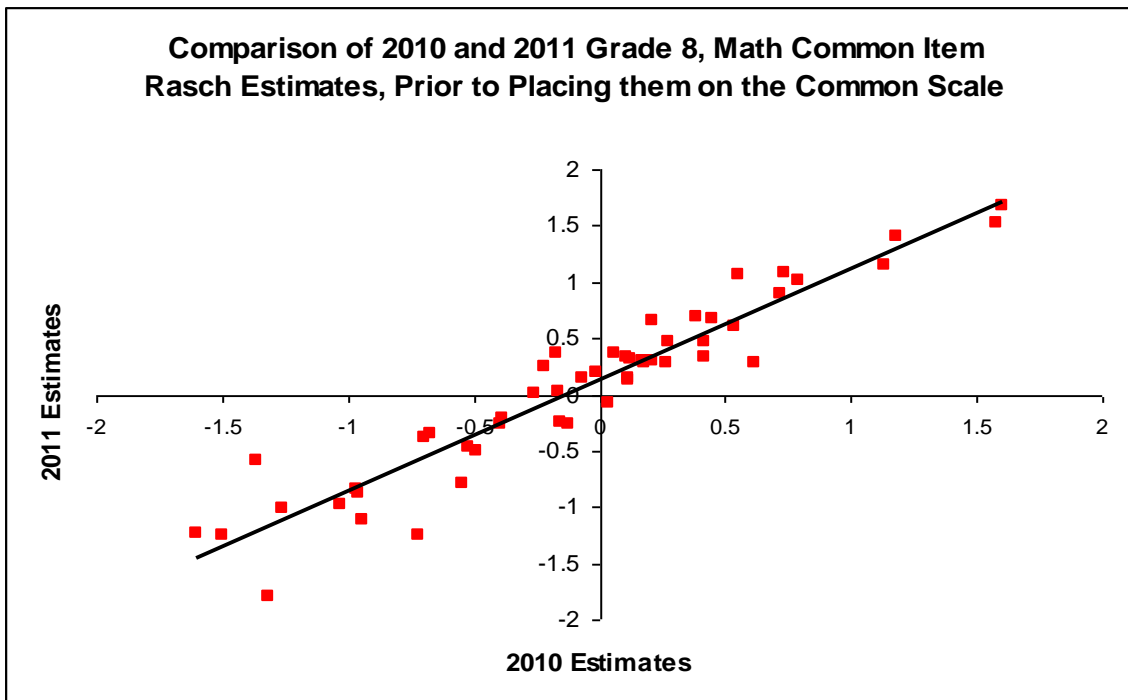


Figure 5.12. Rasch difficulty parameters for the common items, Grade 8, years 2010 and 2011