

Variance in PARCC scores predicted by prior MCAS scores

The table below shows the proportion of 2015 PARCC high school preliminary scaled score variance associated with each student's MCAS raw scores from 2014. PARCC ELA scores are compared to MCAS ELA scores, and PARCC mathematics scores are compared to MCAS mathematics scores.

PARCC test	R^2	N (number of students)
ELA grade 9	0.474721	8364
ELA grade 11	0.344569	6759
Algebra I	0.469225	6151
Geometry	0.488601	1822
Algebra II	0.386884	4525
Integrated math I	0.672400	530
Integrated math III	0.450241	241

R^2 is the square of the Pearson correlation coefficient (R). So one would say, for example, that 47% of the variation in the PARCC grade 9 ELA scores was associated with the student's eight grade MCAS ELA score, among the 8,364 students who took both tests.

N.B.: The Pearson correlation coefficient is named after British statistician Karl Pearson, no relation (as far as we know) to Samuel Pearson, the founder of Pearson PLC (the PARCC testing contractor).