ADAM Construct Validity: Correlation Study (2013)

The *ADAM* assessment was administered to 83 students in grades 1 to 8. Students performed the *ADAM* assessment online in a computer lab. During the same month students were also give the *Scholastic Math Inventory* published by Scholastic. This assessment was administered in the same computer lab setting. It is a computer-based assessment.

The results were as follows when comparing the "total score" on the *ADAM* assessment and the Quantile score on the Scholastic Math Inventory:

Correlation (r): 0.835

Coefficient of Determination (R^2): 69.7%

This represents a very high correlation with low variance. This means that the *ADAM* assessment and the *Scholastic Math Inventory* are highly correlated, and demonstrates further construct validity for the *ADAM* assessment.

ADAM Construct Validity: Correlation Study with the PARCC (2015)

ADAM and *PARCC* data from 7317 students in grades 3 to 8 was examined. These students were from a highly diverse New Jersey school district both ethnically and economically. Students performed both assessments online in a computer lab within 60 days of each other. The results compare the *ADAM* "Total Score" and the "Numbers and Operations" strand score. The N&O strand is one of five strands in *ADAM*.

n	Grade	TS-SS (r)	NUM-SS (r)
1815	3	0.851	0.601
1671	4	0.841	0.640
1713	5	0.838	0.668
1344	6	0.819	0.683
433	7	0.852	0.771
341	8	0.816	0.687

The TT-SS correlation in the table above is the *ADAM* Total Score correlation to the *PARCC* grade-level summative scaled score broken out by grade. The results represent a very high correlation with low variance given the large sample sizes. We would expect the highest correlation between these two scores give that they both span the full scope of grade level math expectations. The *ADAM* NUM score

was evaluated by itself compared to the *PARCC* grade-level summative scaled score given that Numbers and Operations is the largest weighted strand in foundational mathematics. However, we would expect its correlation to be lower. Nonetheless, it does have a high correlation as well.

ADAM Construct Validity: Two Correlation Studies with the SBAC (2015)

ADAM and *SBAC* data from 7681 students in grades 3 to 8 was examined. These students were from a highly ethnically diverse California school district 90% free and reduced lunch designated student population. Students performed both assessments online in a computer lab within 60 days of each other. The results compare the *ADAM* "Total Score" and the "Numbers and Operations" strand score. The N&O strand is one of five strands in *ADAM*.

n	Grade	TS-SS (r)	NUM-SS (r)
1815	3	0.851	0.601
1671	4	0.841	0.640
1713	5	0.838	0.668
1344	6	0.819	0.683
433	7	0.852	0.771
341	8	0.816	0.687

ADAM and *SBAC* data from 1748 students in grades 5 and 6 was examined. These students were from a highly ethnically diverse California school district 85% free and reduced lunch designated student population. Students performed both assessments online in a computer lab within 60 days of each other. ADAM was primarily used to transition students from elementary to middle school and thus the sample size represents all 5th grade students and some 6th grade students. The results compare the *ADAM* "Total Score" and the "Numbers and Operations" strand score. The N&O strand is one of five strands in *ADAM*.

n	Grade	T-SS (r)	NUM-SS (r)
1489	5	0.86	0.63
259	6	0.74	0.55

The TT-SS correlation in the two correlation studies above is the *ADAM* Total Score correlation to the *SBAC* grade-level scaled score broken out by grade. The results represent a very high correlation with low variance given the large sample sizes. We would expect the highest correlation between these two scores give that they both span the full scope of grade level math expectations. The *ADAM* NUM score was evaluated by itself compared to the *SBAC* grade-level scaled score given that Numbers and Operations

is the largest weighted strand in foundational mathematics. However, we would expect its correlation to be lower. Nonetheless, it does have a medium to high correlation.

DOMA Pre-Algebra Construct Validity: Correlation Study (2007)

The *DOMA: Pre-Algebra* assessment was administered to 233 middle school students. Students performed the DOMA: Pre-Algebra assessment online. During the same week students were also give the Orleans-Hannah Algebra Prognosis Test published by Harcourt. This assessment is administered in a group setting. It is a paper and pencil assessment.

The results were as follows when comparing the "raw score" on the DOMA assessment and the total number of questions correct on the Orleans-Hannah Algebra Prognosis Test:

Correlation: 0.754

Delta: 0.066

This represents a high correlation with low variance. This means that the DOMA: Pre-Algebra assessment and the Orleans-Hannah Algebra Prognosis Test are highly correlated, and demonstrates further construct validity for the *DOMA: Pre-Algebra* assessment.

DOMA Pre-Algebra Construct Validity: Correlation Study with the PARCC (2015)

DOMA: Pre-Algebra and PARCC assessment data from 1528 6th and 7th grade students was examined from an urban school district in New Jersey. Both assessments were performed within 60 days of each other in the spring of 2015.

n	Grade	PreA-MathSS (r)
156	6	0.871
1372	7	0.804

The correlation between these two assessments was very high with low variance indicating strong construct validity. This New Jersey school district was highly diverse ethnically and had a high percentage of students categorized as economically disadvantaged by state and federal designations.