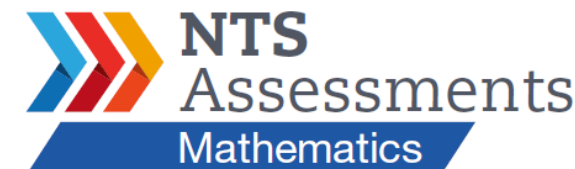


NTS Assessments Mathematics (2nd ed.)

SATs Correlation and Validation Study



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NTS Assessments Mathematics/SATs Correlation and Regression Analysis

The validity of Hachette Learning's *NTS Assessments Mathematics* (2nd ed.) was tested during the 2024–2025 school year. Schools participating in the validation trial provided their *NTS Assessments Mathematics* test results for Year 2 and Year 6 pupils, as well as their pupils' KS1 and KS2 SAT maths results. Over 1000 pupils' Year 6 and KS2 results were analysed. The sample size drops to 79–94 for Year 2 and KS1, since KS1 assessments are optional for schools and many did not sit that SAT test.

Table 1 shows the sample size for each year group and term who were included in the trial.

Table 1: Summary statistics of trial samples. In this table, **EXS** = working at the expected standard (100+ scaled score at the SATs), which includes working at or higher; **GDS** = working at greater depth (110+ scaled score at the SATs).

NTS Maths	SATs	Number of learners	NTS Maths mean average	NTS Maths standard deviation	SATs mean average	SATs standard deviation	SATs EXS learners	SATs EXS%	SATs GDS learners	SATs GDS%
Y2 Autumn	KS1	79	104.7	12.8	105.0	5.7	66	84%	20	25%
Y2 Spring	KS1	88	103.4	13.4	104.7	6.0	74	84%	21	24%
Y2 Summer	KS1	94	103.7	11.3	104.4	6.0	78	83%	22	23%
Y6 Autumn	KS2	1019	100.3	14.5	104.8	7.8	806	79%	285	28%
Y6 Spring	KS2	1057	100.4	14.5	104.8	7.8	838	79%	291	28%
Y6 Summer	KS2	1024	100.1	14.7	104.8	7.8	813	79%	281	27%

As can be seen from Table 1, means and standard deviations for the respective tests were broadly in line with national averages. For 2025, the DfE reported a mean score on the KS2 Maths SAT as 105. *NTS Assessments Mathematics* was standardised for a mean of 100 and standard deviation of 15. Despite scores broadly matching national averages, the pass rate (i.e. pupils who met the expected standard of scaled score of 100 or more) within the sample for KS2 was a bit higher than the national average for maths, reported at 74%. Our sample's pass rate for KS2 was around 79%, indicating a slight bias towards higher achieving schools.

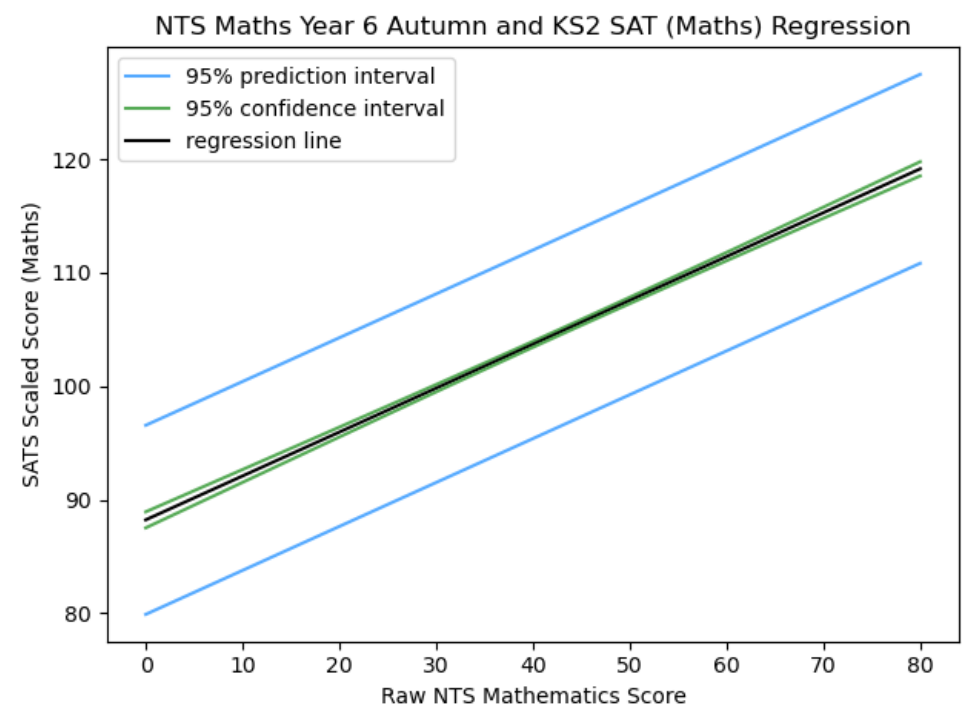
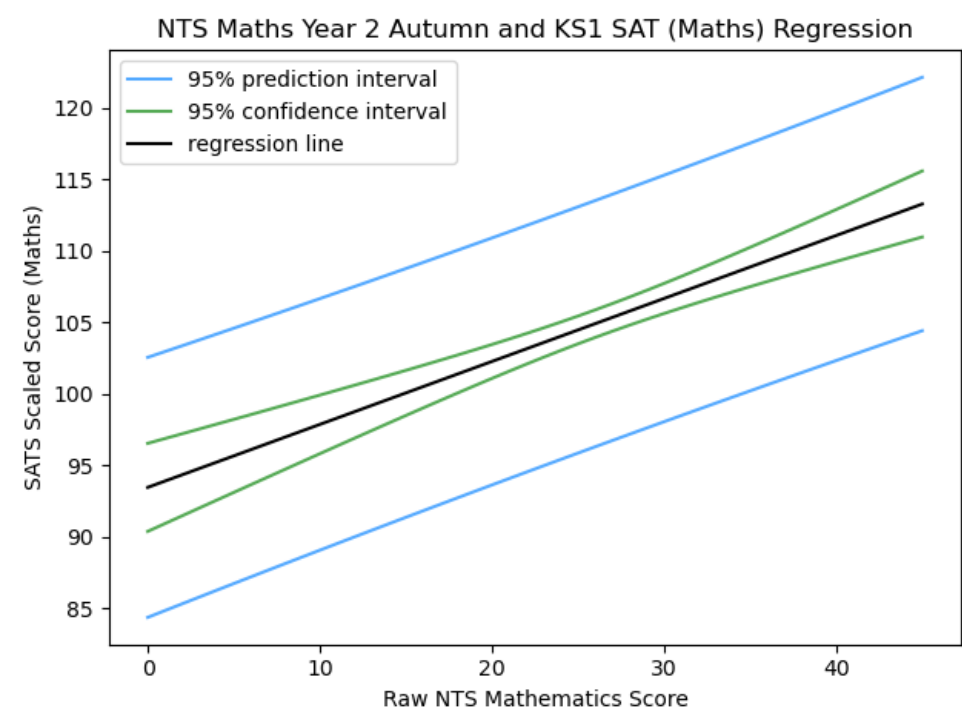
Pearson's correlation coefficients can be found in Table 2 below for the trialled tests. It can be seen that Year 6 *NTS Assessments Mathematics* has a very strong positive correlation (greater than 0.8) with KS2 outcomes. This indicates excellent external criterion validity for NTS Maths as an indicator for KS2 Maths attainment outcomes. For KS1, the correlation was reduced, ranging between 0.67 and 0.73, which is a strong positive correlation, but it should be treated more cautiously due to the reduced sample size and possible selection bias resulting from the KS1 SAT being optional.

Table 2: Correlation coefficients between NTS Assessments Mathematics and SATs tests

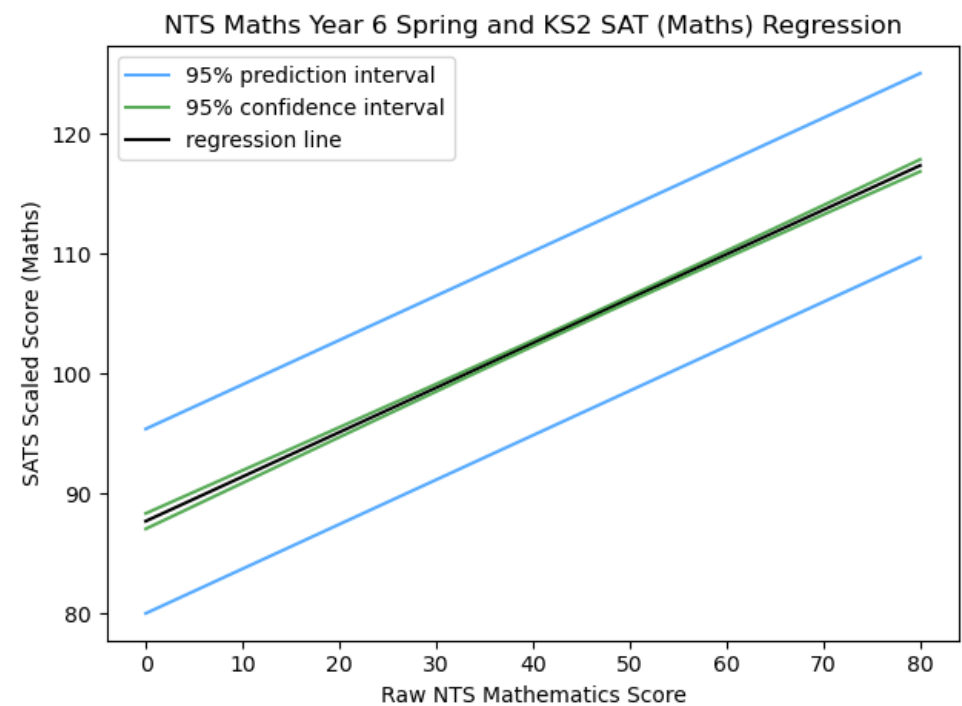
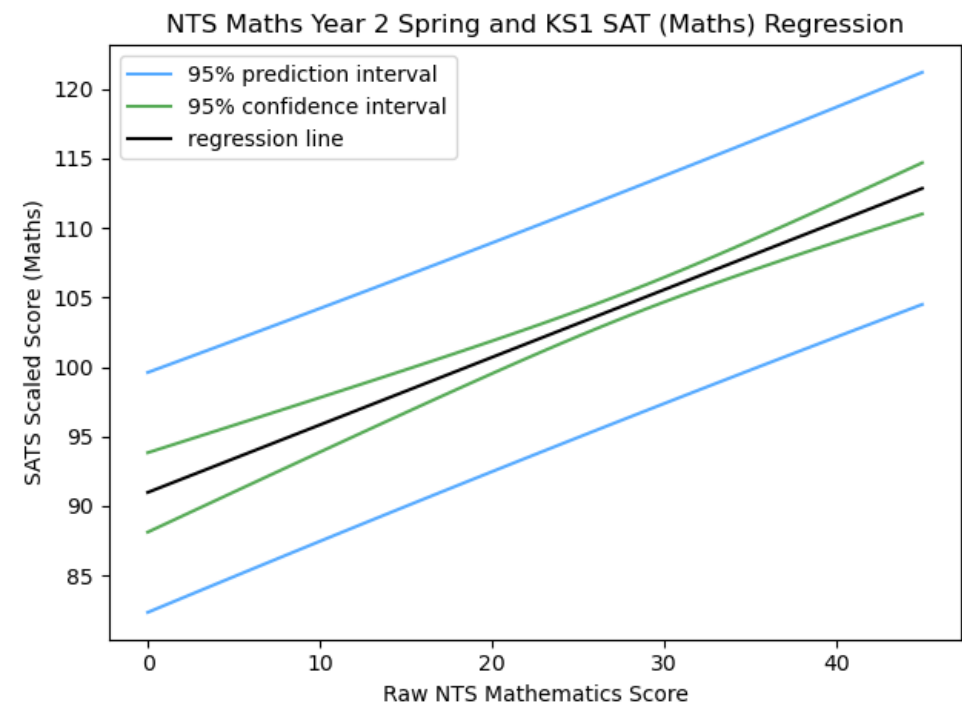
NTS Maths	SAT	Correlation	Interpretation
Year 2 Autumn	KS1	0.67	Strong positive
Year 2 Spring	KS1	0.73	Strong positive
Year 2 Summer	KS1	0.68	Strong positive
Year 6 Autumn	KS2	0.84	Very strong positive
Year 6 Spring	KS2	0.86	Very strong positive
Year 6 Summer	KS2	0.87	Very strong positive

Given the strong positive correlation between *NTS Assessments Mathematics* and SAT Maths, a regression analysis predicting SAT scores based on NTS Maths outcomes can be conducted. The results of the regression models can be seen in the below figures. Additionally, results are provided as Excel spreadsheets, available to download in Boost Insights' resources section. The confidence interval bands provide a range of expected **mean** SATs scaled scores for any given *NTS Assessments Mathematics* raw score. The prediction interval bands provide a range of likely predicted values for **individuals'** SATs scaled score for any given *NTS Assessments Mathematics* raw score. Prediction intervals are always wider than confidence intervals as they relate to predicting an individual's score, which can vary widely due to many factors on any given day. Confidence intervals are smaller because they relate to an average of scores that can be expected over time. The intervals for KS1 are larger because of the smaller sample size compared to KS2.

Graphs 1 and 2: Regression lines predicting SATs scaled scores from NTS Assessments Mathematics Autumn scores



Graphs 3 and 4: Regression lines predicting SATs scaled scores from NTS Assessments Mathematics *Spring* scores



Graphs 5 and 6: Regression lines predicting SATs scaled scores from NTS Assessments Mathematics Summer scores

