

Benchmarking Year 6 numeracy performance: Are standards being met?





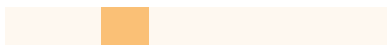
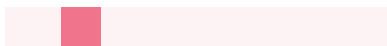
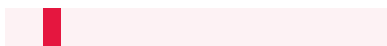
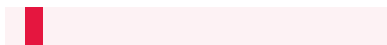
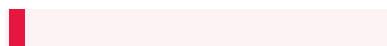
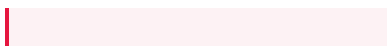
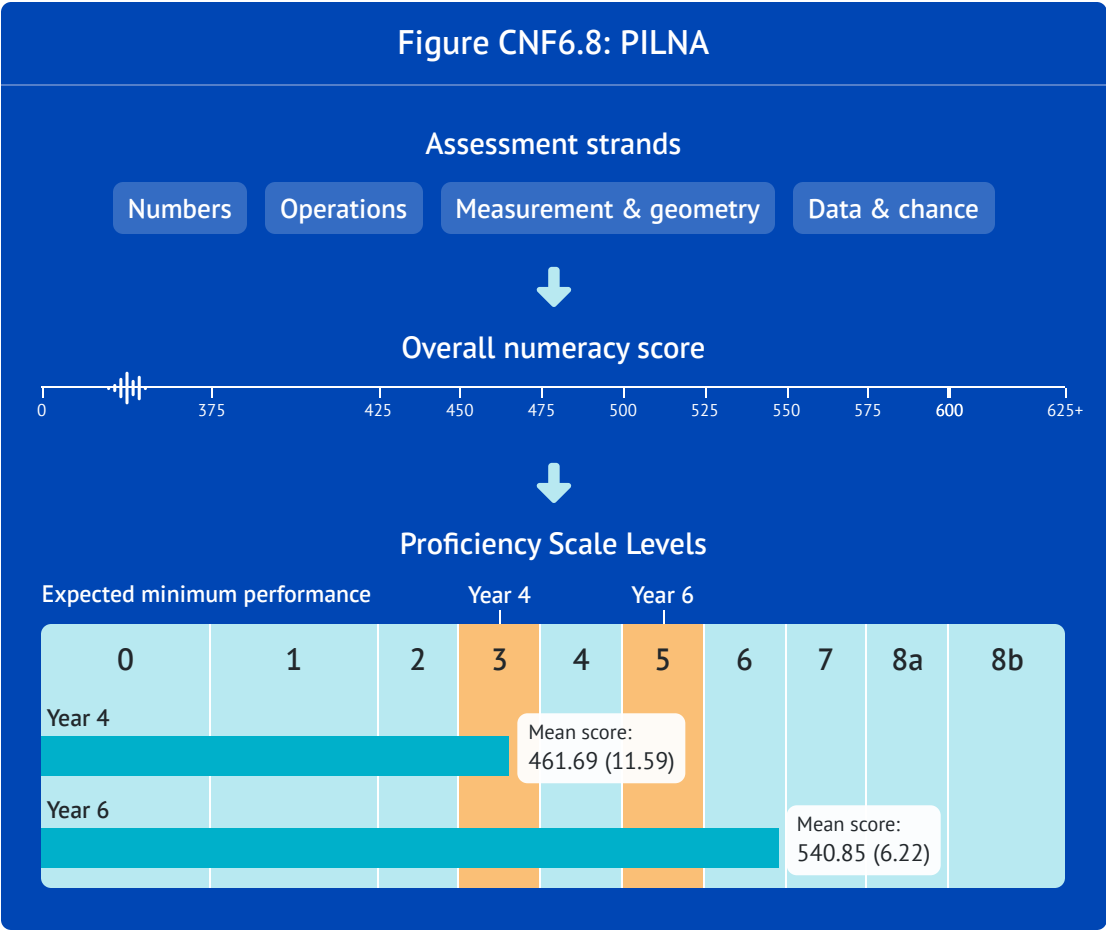
Table CNT6.1		
Year 6 Student proficiency in numeracy		
level	Distribution	
8b		8.69% (2.13)
8a		21.99% (3.62)
7		16.87% (2.58)
6		15.37% (3.33)
5		12.52% (3.01)
4		10.35% (2.62)
3		4.68% (2.04)
2		4.27% (1.71)
1		4.13% (2.24)
0		1.13% (1.33)
Distribution of Year 6 students by proficiency levels, Cook Is, PILNA 2021		
() Standard errors appear in parentheses.		

Table CNT6.1 shows the Cook Islands' distribution of year six overall numeracy scores against the PILNA numeracy proficiency scale. This scale converts a student's overall numeracy score into a level ranking from zero to eight. The expected minimum overall numeracy performance for year six students is **proficiency level five**. Pacific stakeholders expect these students to reach or exceed this proficiency level.

The average overall numeracy score for year six students in Cook Islands in 2021 was 540.85 (SD = 64.83). This corresponds to proficiency level six in the PILNA numeracy proficiency scale (level six is assigned to scores 525–550). On average, year six students in Cook Islands are achieving above the minimum expected standard in numeracy. They had a slightly higher average score in numeracy than the average regional score of 530.59 (SD = 63.45) as shown in Figure CNF6.8.



The average numeracy score does not tell us the whole story. The proportion of students who are meeting the minimum expected standard is also important. Approximately 75% of students, three out of four, performed at or above this expected level (levels 5–8). Conversely, approximately 25% of students, more than one in four, performed below the expected proficiency level (levels 0–4). In other words, most year six students are meeting the minimum expected level for numeracy (75%), but there is a substantial proportion of year six students (25%) who are yet to meet the minimum expected proficiency level.

Table CNT6.2

Distribution of year 6 student numeracy proficiency relative to the region and SIS

level	Region	SIS	cook islands_percent	cook islands_se	cook islands_cumulative
8b	5.21% (0.44)	9.91% (2.34)	8.69	2.13	91.31
8a	18.31% (0.68)	21.36% (2.83)	21.99	3.62	69.32
7	16.87% (0.51)	15.56% (1.73)	16.87	2.58	52.45
6	16.66% (0.53)	14.75% (1.50)	15.37	3.33	37.08
5	14.94% (0.48)	11.42% (1.31)	12.52	3.01	24.56
4	10.31% (0.44)	8.49% (1.33)	10.35	2.62	14.21
3	6.52% (0.39)	5.78% (1.73)	4.68	2.04	9.53
2	4.84% (0.34)	4.72% (1.36)	4.27	1.71	5.26
1	4.80% (0.39)	6.15% (1.78)	4.13	2.24	1.13
0	1.53% (0.21)	1.85% (0.78)	1.13	1.33	0

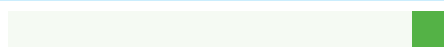
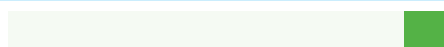








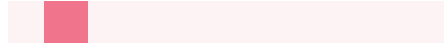
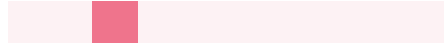
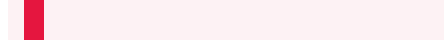
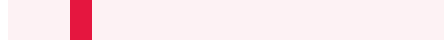
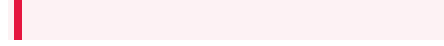
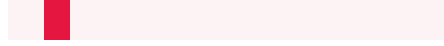




Distribution of year 6 students' proficiency levels in Cook Is, PILNA 2021

() Standard errors appear in parentheses.

Table CNT6.2 compares the numeracy performance of year six students in Cook Islands against that in the Small Island States and the entire region. In Cook Islands, a slightly higher proportion (75%) of students performed at or above the expected minimum proficiency level than in the Small Island States (73%) and the region (72%) as a whole. Similar to the region and Small Island States, Cook Islands also saw more students performing at the highest level of proficiency (levels 6–8) than the lower levels (levels 0–2).

Table CNT6.3

Year 6 Numeracy distribution by proficiency scores and gender

level	Girls	Boys
8b	 7.63 % (2.29)	 9.58 % (3.31)
8a	 23.85 % (4.48)	 20.44 % (6.37)
7	 21.47 % (5.96)	 13.02 % (3.37)
6	 14.95 % (4.98)	 15.73 % (4.29)
5	 13.78 % (4.70)	 11.46 % (3.37)
4	 9.94 % (3.60)	 10.69 % (3.58)
3	 4.63 % (2.60)	 4.71 % (2.47)
2	 1.95 % (1.59)	 6.21 % (2.93)
1	 1.66 % (1.21)	 6.20 % (3.63)
0	 0.15 % (0.48)	 1.96 % (2.29)

Distribution of year 6 reading proficiency scores by gender, Cook Is, PILNA 2021

() Standard errors appear in parentheses.

When looking at the Cook Islands' distribution of year six numeracy proficiency scores in 2021 by gender (Figure CNT6.3), differences can be seen for girls and boys. Approximately 82% of girls performed at or above the expected proficiency level (levels 5–8) compared to approximately 70% of boys, and 10% more girls than boys were performing at the higher levels (6–8), with 10% more boys than girls performing at the lower levels (0–2). Similar proportions of students were performing at the mid-levels (3–5).

Table CNT6.4

Year 6 PILNA numeracy proficiency scale over time

Level	2012	2015	2018	2021
	2.87%	3.93%	29.11%	30.68%
	6.48%	10.37%	13.08%	16.87%
	11.30%	15.70%	14.56%	15.37%
	21.57%	16.17%	15.00%	12.52%
	22.59%	22.62%	13.43%	10.35%
	16.11%	15.98%	7.89%	4.68%
	9.07%	8.32%	3.95%	4.27%
	7.13%	5.79%	2.33%	4.13%
	2.87%	1.12%	0.64%	1.13%

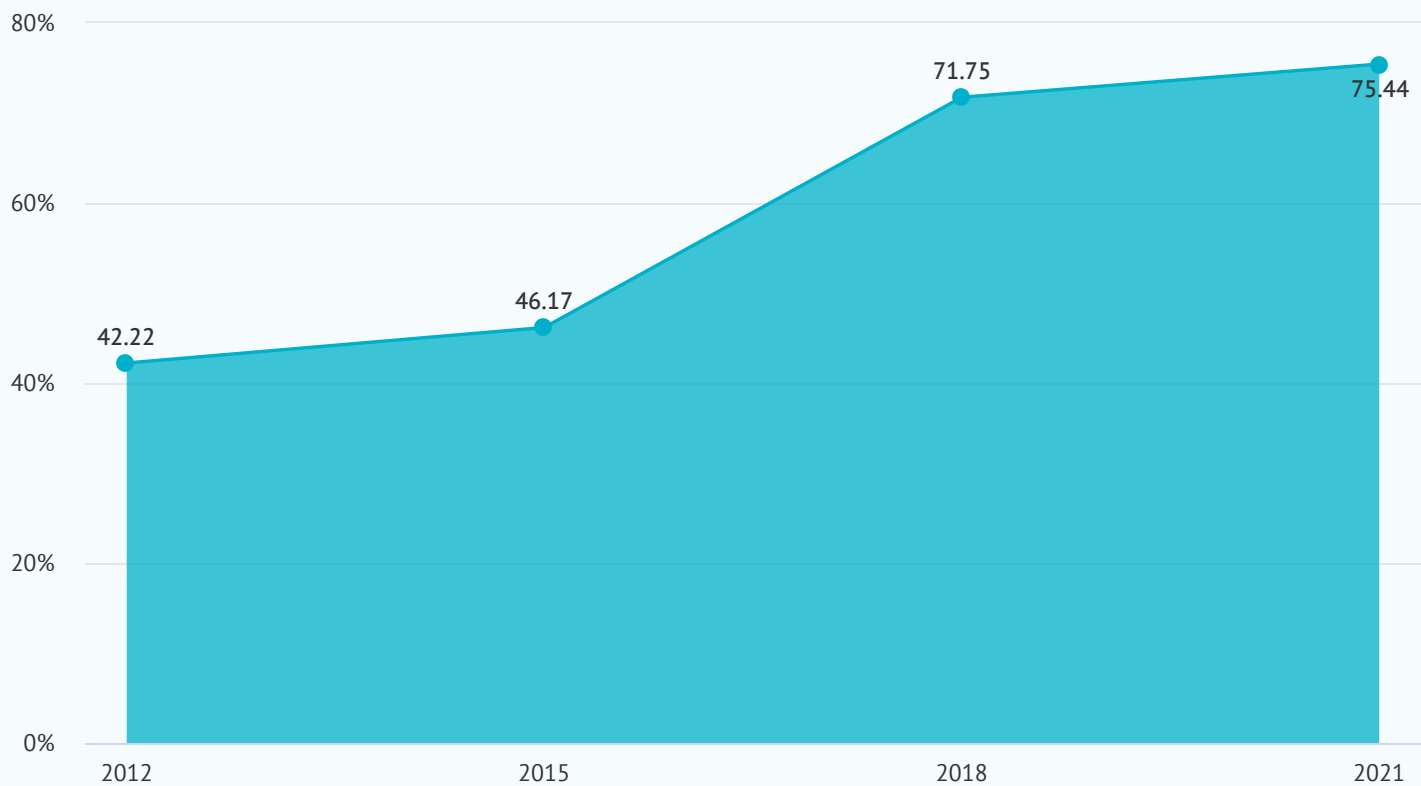
Distribution of year 6 students numeracy scores, Cook Is, PILNA 2012, 2015, 2018, 2021

() Standard errors appear in parentheses.

Table CNT6.4 shows year six scores for Cook Island students on the PILNA numeracy proficiency scale over time. Accompanying this, is Figure CNF6.9, showing the proportion of year six students in Cook Islands meeting the minimum overall numeracy standard over time. A higher proportion of year six students met the minimum expected level of overall numeracy performance in 2021 than in the previous three PILNA cycles (2012 = 42%, 2015 = 46%, 2018 = 72%, 2021 = 75%). This differs from the regional results, which saw a lower proportion of students performing at the minimum expected level in 2021 than in 2018 (2012 = 57%, 2015 = 68%, 2018 = 83%, 2021 = 72%).

Figure CNF6.9

Proportion of year six students meeting the overall numeracy standard over time



Year	Students at/above minimum
2012	42.22
2015	46.17
2018	71.75
2021	75.44

Proportion of year six students meeting the overall numeracy standard over time, Cook Is, PILNA 2012, 2015, 2018, 2021