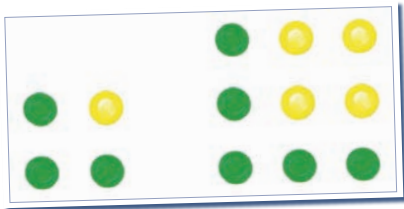


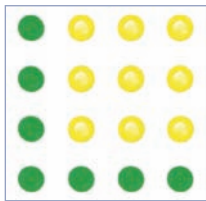
Approach: Station  
 Focus: Patterns and relationships  
 Resources: Picture, green and yellow pencils, answer booklet

**Questions / instructions:**

Look at the picture.  
 It shows a pattern made with counters.



1. Use the green and yellow pencils to draw the next pattern – pattern number 3.



pattern drawn appropriately

% response  
2009 ('05)  
year 4 year 8

25 (31) 53 (71)

**YEAR 8 ONLY:**

2. This table shows the pattern in numbers. Finish the table by filling in the missing numbers.

| Pattern | Green | Yellow |
|---------|-------|--------|
| 1       | 3     | 1      |
| 2       | 5     | 4      |
| 3       | 7     | 9      |
| 4       | 9     | 16     |
| 5       | 11    | 25     |
| 100     | 201   | 10 000 |

both correct  
one correct

both correct  
one correct

both correct  
one correct

both correct  
one correct

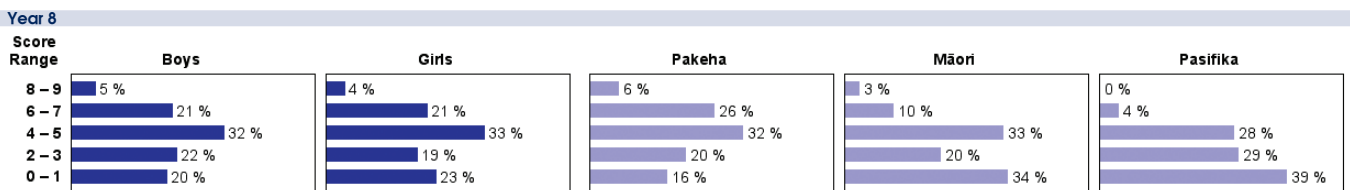
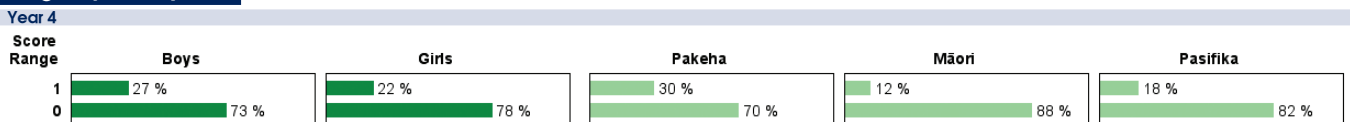
**Total Score:**  
 8–9  
 6–7  
 4–5  
 2–3  
 0–1

% response  
2009 ('05)  
year 8

43 (47)  
 36 (36)  
 29 (30)  
 46 (48)  
 23 (27)  
 50 (48)  
 3 (5)  
 5 (7)

5 (9)  
 21 (23)  
 32 (33)  
 20 (16)  
 22 (19)

**Subgroup Analyses:**



**Commentary:**

This task involved recognition and extrapolation of patterns. Very few year 8 students managed the final step of generalising the pattern to the 100th step. Performance dropped a little for both year 4 and year 8 students between 2005 and 2009. At year 8 level, Pasifika students were much less successful, on average, than Pakeha students.