## Trend Task: Playing with Perimeter

Approach:	Independent
Focus:	Perimeter and area
<b>Resources</b> :	Ruler, answer booklet

## Questions / instructions:

Shapes with the same perimeter can have different areas.

Draw 3 rectangles that have perimeters of 24 cm.
Write the area in the middle of each rectangle.



	% response 2009 ('05)	
		year 8
First Rectangle:		
Drew: rectangle		79 (81)
Perimeter: 24 cm		43 (39)
<b>Correct area given:</b> with units ( <i>cm</i> <sup>2</sup> )		14 (15)
correct area given, no units/cms ONLY		11 (14)
Second Rectangle:		
Drew: rectangle		51 (55)
Perimeter: 24 cm		31 (34)
<b>Correct area given:</b> with units ( <i>cm</i> <sup>2</sup> )		13 (18)
correct area given, no units/cms ONLY		8 (10)
Third Rectangle:		
Drew: rectangle		47 (46)
Perimeter: 24 cm		29 (29)
<b>Correct area given:</b> with units ( <i>cm</i> <sup>2</sup> )		12 (16)
correct area given, no units/cms ONLY		6 (9)
Overall.		
drew three rectangles, all with 24 cm		
perimeters, all with different areas		20 (21)
perimeters, two or more with same areas		1 (2)
Total Score: 11–14		14 (19)
8–10		10 (10)
5–7		12 (6)
2–4		28 (30)
0–1		36 (35)

8

## Score Range Boys Girls Pakeha Māori Pasifika 11 – 14 13 % 18 % 7 % 2 % 16 % 8 – 10 8 % 1 % 11 % 9 % 5 % 5 – 7 12 % 11 % 14 % 7 % 5 % 2 – 4 28 % 30 % 28 % 26 % 36 % 0 - 1 36 % 35 % 29 % 51 % 52 %

## Commentary:

Subgroup Analyses:

Year 8

Many year 8 students were not skilled in calculating the perimeters or areas of rectangles. There was little change in performance from 2005 to 2009. About half of Māori and Pasifika students and 29% of Pakeha students had virtually no success with this task.