Trend Task: Fractious Fractions (Y8)

NEMP Access Task

Approach:	One to one
Focus:	Fractions of an amount
Resources:	24 multilink blocks, 4 cards
Year:	8

Questions / instructions:

Hand students 24 multilink blocks and card 1.

Here are 24 blocks. $\frac{1}{4}$

1. What is $\frac{1}{4}$ of 24? — 6

   Tell me how you worked this out.
   You can use the blocks if you want to.

   Calculation strategy:

	% response 2009 ('05) year 8
24 ÷ 4 = 6	26 (28)
4 × 6 = 24	20 (21)
4 equal groups with blocks, count 1 group	13 (16)
any other appropriate strategy	20 (18)

Hand student card 2. $\frac{2}{3}$

2. What is $\frac{2}{3}$ of 24? — 16 — 56 (51)

   Tell me how you worked this out.
   You can use the blocks if you want to.

   Calculation strategy:

	% response 2009 ('05) year 8
24 ÷ 3 = 8 and 2 × 8 = 16	24 (23)
3 × 8 = 24 and 2 × 8 = 16	14 (8)
3 equal groups with blocks, count 2 groups	14 (19)
any other appropriate strategy	5 (3)

Hand student card 3. $\frac{5}{6}$

3. What is $\frac{5}{6}$ of 24? — 20 — 56 (59)

   Tell me how you worked this out.
   You can use the blocks if you want to.

   Calculation strategy:

	% response 2009 ('05) year 8
24 ÷ 6 = 4 and 5 × 4 = 20	22 (24)
6 × 4 = 24 and 5 × 4 = 20	12 (8)
6 equal groups with blocks, count 5 groups	17 (25)
any other appropriate strategy	5 (5)

Remove the blocks from the student but leave them in sight. Hand student card 4. $1\frac{1}{2}$

4. If you had to find $1\frac{1}{2}$ lots of these blocks, how many would you need? — 36 — 53 (48)

   Tell me how you worked this out.
   You can use the blocks if you want to.

   Calculation strategy:

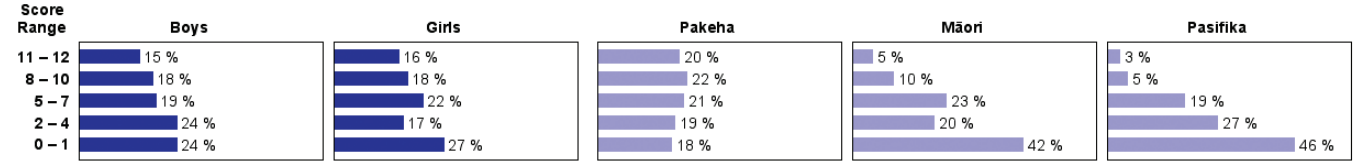
	% response 2009 ('05) year 8
24 ÷ 2 = 12 and 12 + 24 = 36; OR $\frac{1}{2}$ × 24 = 12 and 12 + 24 = 36	46 (47)
2 × 12 = 24 and 12 + 24 = 36	1 (0)
found $\frac{1}{2}$ of 24 blocks, added to 24	4 (0)
any other appropriate strategy	4 (4)

Total Score:

	% response 2009 ('05) year 8
11–12	15 (11)
8–10	18 (23)
5–7	21 (19)
2–4	20 (27)
0–1	26 (20)

Subgroup Analyses:

Year 8



Commentary:

There was no meaningful change in performance from 2005 to 2009. Both Māori and Pasifika students averaged substantially lower than Pakeha students.