Approach: One to one   **Year:** 8
Focus: Computation strategies
Resources: Card

Questions / instructions:

% response
2009 ('05)
year 8

Hand card to student.

This card tells you that 54 times 6 is 324.
Use this fact to work out 56 times 6.

1. Tell me what you think
   the answer is.   336   70 (63)

2. Now tell me how you worked it out.
   PROMPT: Can you explain that a bit
              more to me?

$54 \times 6 = 324$
$56 \times 6 = \boxed{}$

% response
2009 ('05)
year 8

explanation show understanding
that the answer must be 2 lots of
six (12) more than 324   56 (42)

another valid strategy that made use
of information that $54 \times 6 = 324$ 5 (10)

tried to directly calculate 56×6
(i.e. did not make use of $54 \times 6 = 324$)   14 (18)

any other response, including
unclear explanation   25 (30)

Total Score: 4   52 (39)
                       3   8 (7)
                       2   13 (20)
                       1   5 (9)
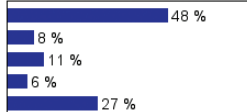   0   22 (25)
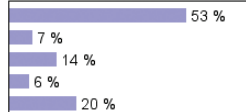
Subgroup Analyses:

Year 8
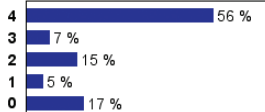
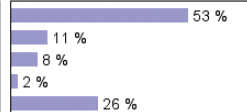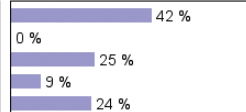| Score Range	Boys	Girls	Pakeha	Māori	Pasifika
4	56 %	48 %	53 %	53 %	42 %
3	7 %	8 %	7 %	11 %	0 %
2	15 %	11 %	14 %	8 %	25 %
1	5 %	6 %	6 %	2 %	9 %
0	17 %	27 %	20 %	26 %	24 %

Commentary:

Between 2005 and 2009, the percentage of year 8 students using an efficient number strategy to solve this task increased substantially, leading to a smaller rise in success with the task. Boys did a little better than girls, on average, with only small differences between Pakeha, Māori and Pasifika students.