Assessment Schedule – 2007

Mathematics: Solve straightforward number problems in context (90151)

Evidence Statement

	Criteria	Qu	Evidence	Code	Judgement	Sufficiency
ACHIEVEMENT	Solve straightforward number problems in context.	1	Acc = \$1746 – \$761 = \$985 So Acc = \$985 ÷ \$1746 × 100 = 56.41… = **56%**	A	Units are not required anywhere. Any correct rounding / truncation anywhere. *	THREE of code A. Replacement evidence: Q 4b, 4c, 5, 6
		2	$1 - \frac{1}{2} - \frac{1}{3} = \mathbf{\frac{1}{6}}$	A	Accept 0.1666… eg 0.16, or 0.17	
		3	1836 ÷ 12 × 3 = **459**	A	CAO is sufficient evidence, where accuracy of answer implies appropriate calculations done.	
		4(a)	0.85 × \$280 = **\$238**	A		
ACHIEVEMENT WITH MERIT	Solve number problems in context, involving manipulation, several steps or reversing processes.	4(b)	\$243 = 81.5% of usual price So usual price = \$243 ÷ 0.815 = \$298.159… ≈ **\$298**	A or M	Units are not required anywhere.	ACHIEVEMENT plus TWO of code M OR THREE of code M
		4(c)	$\$459 = \frac{9}{8}$ of GST-free price So GST = \$459 ÷ 9 = **\$51**	A or M	Any correct rounding / truncation anywhere.*	
		5	$3.29 \times 10^8 \div (1.75 \times 10^4)$ = **18800** or 1.88×10^4 km	A or M	CAO is sufficient evidence, where accuracy of answer implies appropriate calculations done.	Replacement evidence: Q 6

ACHIEVEMENT WITH EXCELLENCE	Devise a strategy and solve a number problem.	6	Accumulated increases give '07 price of $\$985 \times 1.025^3 \times 1.028 \times 1.034 \times 1.057$ $= \$1191.781\ldots..$ Discount needed = \$1191.781.. –\$985 = \$206.78…at most! As a % of the *November 2007* price, this is \$206.78…. ÷ \$1191.78… × 100 = 17.35051771…. ≈ 17.4% Recommendation: Minimum discount to satisfy the claim is 17.4%.	A E	Give code A for a correct final fare. Accept 18%, etc. Answers will vary depending on timing and extent of rounding. **Rounding up** is needed here to make the claim true. A correct % to satisfy the advertising claim is required. For Excellence, calculations and/or explanations are needed to show the strategy used to reach the final answer.	ACHIEVEMENT with MERIT plus code E

*** re Rounding/truncation**
Where working is given to support/show how an answer was obtained, then the comment *"accept any rounding/truncation"* applies.
For money situations, accept rounding to the nearest cent (ie 2 dp) and to the nearest 10 cents.
When CAO applies, the answer presented needs to be "accurate enough" to count as evidence of appropriate processes having been used.

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
Solve straightforward number problems in context. $3 \times$ A	Solve number problems in context involving manipulation, several steps or reversing processes. **Achievement** *plus* $2 \times$ M *or* $3 \times$ M	Devise a strategy and solve a number problem. **Merit** *plus* $1 \times$ E

The following Mathematics-specific marking conventions may also have been used when marking this paper:

- Errors are circled.
- Omissions are indicated by a caret (^).
- **NS** may have been used when there was not sufficient evidence to award a grade.
- **CON** may have been used to indicate 'consistency' where an answer is obtained using a prior, but incorrect answer and **NC** if the answer is not consistent with wrong working.
- **CAO** is used when the 'correct answer only' is given and the assessment schedule indicates that more evidence was required.
- **#** may have been used when a correct answer is obtained but then further (unnecessary) working results in an incorrect final answer being offered.
- **RAWW** indicates right answer, wrong working.
- **R** for 'rounding error' and **PR** for 'premature rounding' resulting in a significant round-off error in the answer (if the question required evidence for rounding).
- **U** for incorrect or omitted units (if the question required evidence for units).
- **MEI** may have been used to indicate where a minor error has been made and ignored.