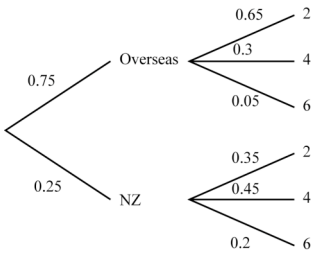
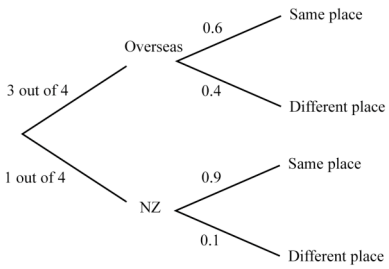
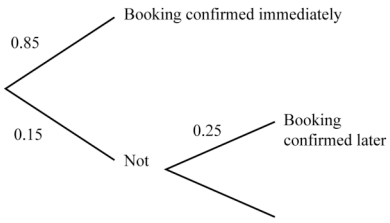
Assessment Schedule – 2007

Mathematics: Determine probabilities (90194)

Evidence Statement

	Criteria	Question	Evidence	Code	Judgement	Sufficiency
Achievement	Determine probabilities.	One (a)	$\frac{698}{1230}=\frac{349}{615}=0.56747....$	A	Allow equivalent fractions, decimals, or percentages.	THREE of Code A *Replacement evidence can be found in Q3.*
		(b)	$\frac{145}{435}=\frac{1}{3}=0.333....$ (not 0.3)	A		
		Two (a)	$\frac{1}{9}$ *or* $0.111....$	A		
		(b)	$\frac{2}{3}$ *or* $0.666....$	A		
Achievement with Merit	Solve probability problems using theoretical methods.	Three			Allow equivalent fractions, decimals, or percentages.	THREE of Code M *Replacement evidence can be found in 3(d).*
		(a)	$0.75 \times 0.05 = 0.0375 = \frac{3}{80}$	M or A	CAO	
		(b)	$0.75 \times 0.3 + 0.25 \times 0.45 = 0.3375$ $= \frac{27}{80}$	M or A	CAO	
		(c)	 $P = 0.75 \times 0.6 + 0.25 \times 0.9$ $= 0.675$ $= \frac{27}{40}$	M or A	CAO	

Achievement with Excellence	Explore probability situations to solve problems.	Three (d)	 P(10-day booking satisfied). $= 0.85 + 0.15 \times 0.25$ $= 0.85 + 0.0375$ $= 0.8875$ So, P(customer request not met) $= 0.1125$ Solve for N: $20 = 0.1125 \times N$ $N = 177.77\ldots$ 177 or 178 customer requests. Or $0.75p = 20$ so $0.25p = 6\frac{2}{3}$ Not confirmed Confirmed later Not confirmed immediately $= 26\frac{2}{3}$ $26\frac{2}{3} \div 0.15 = 177\frac{7}{9}$ $= 177$ or 178 cust reqs	A M or E	Some relevant working required. Guess and check Not acceptable At least 1 statement of explanation required Accepted answers (6 or 7 people) (26 or 27) (173 or 180)	Merit **plus** Code E

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
Determine probabilities. $3 \times$ A	Solve probability problems using theoretical methods. $3 \times$ M	Explore probability situations to solve problems. **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.