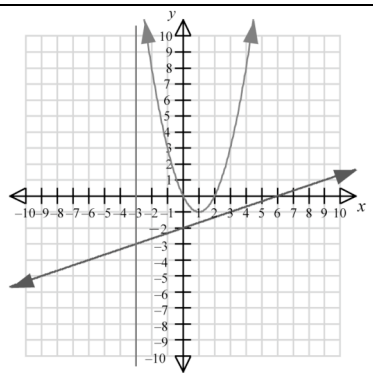
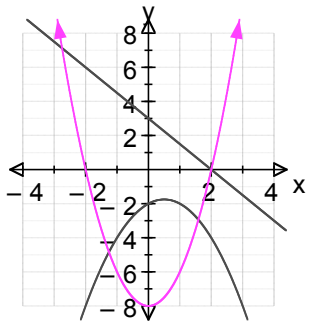
Assessment Schedule – 2007

Mathematics: Sketch and interpret graphs (90148)

Evidence Statement

	Achievement Criteria	No	Evidence	Code	Judgement	Sufficiency
ACHIEVEMENT	Sketch, and interpret features of graphs.	1a		AS	Units not required anywhere. Correct shape, gradient and correct intercepts	**Achievement:** TWO of AI AND TWO of AS.
		1b		AS		
		1c		AS		
		2a	200 (m)	AI		**Replacement:** Any MI for AI Any MS for AS.
		2b	50 (metres / minute)	AI	Accept ± 50.	
		2c	3 (minutes)	AI		

	Achievement Criteria	No	Evidence		Judgement	Sufficiency
ACHIEVEMENT WITH MERIT	Sketch, and interpret features of, graphs.	2e	4.32 pm	MI	Units not required Accept: after 2 minutes.	**Merit:** Achievement **plus** **Four** of MI or MS With at least 1 MI or MS **and** **Two** of MQ
		5a	0.9 metres. This is the initial height of the ball as John kicks to Richard.	MI	Both parts required; accept equivalent explanation.	
		5b	Use $x = 4$ to get 2.5 metres.	MI		
		4a		MS	Line (a): y-int 3; gradient $-\frac{3}{2}$	
		4b		MS		
		4c		MS	Parabola (b): y-int –8; x-int 2, –2; correct shape. Parabola (c): y-int –2; at least one other correct point; correct shape.	
	Write equations for linear graphs.	2d	$d = -100t + 300$	MQ	Or equivalent.	**Replacement**: 5(c) equation for MQ 5(c) solution for MI
		3a	$y = \frac{1}{5}x$	MQ	Or equivalent.	
		3b	$y = 3$	MQ	Or equivalent.	
ACHIEVEMENT WITH EXCELLENCE	Determine and apply an appropriate model for a situation involving graphs.	5c	Equation is of the form $y = -kx^2 + 3$ Use (–4,1) to get $k = \frac{1}{8}$. When $x = 1.5$, $y = 2.71875$. This is higher than Richard can reach, so he won't be able to reach the ball.	E	Must give an equation (model), and use it to determine the solution to the problem.	**Excellence:** Merit **plus** **Code** E

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
Sketch and interpret features of graphs. $2 \times$ AI *plus* $2 \times$ AS.	Sketch and interpret features of graphs. Write equations for linear graphs. **Achievement** *plus* **4** of MI or MS with at least 1 MI or MS *and* **2** of MQ	Determine and apply an appropriate model for a situation involving graphs. **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.