Assessment Schedule – 2006
Mathematics: Use coordinate geometry methods (90287)
Evidence Statement

	Assessment Criteria	No.	Evidence	Code	Judgement	Sufficiency
ACHIEVEMENT	Use coordinate geometry methods.	1 (a)	(5,2)	A	Or equivalent.	Achievement: Two As
		1 (b)	$y - 5 = -3(x - 4)$ $3x + y - 17 = 0$	A	Or equivalent.	
		1 (c)	$y + 1 = -\frac{1}{2}(x - 6)$ $x + 2y - 4 = 0$	A	Or equivalent. Units not required anywhere in this activity.	
MERIT	Solve problems involving coordinate geometry methods.	2(a)	Eqn of line OB: m = 2 $y = 2x$ eqn AC: $m = -\frac{1}{4}$ $y = -\frac{1}{4}(x - 6)$ $y = 2x$ point of intersection $(\frac{2}{3}, \frac{4}{3})$	M A	Or equivalent. Must give both coordinates. Correct answer only receives no credit.	Merit: Achievement plus Two Ms OR all Ms.
		2(b)	Grad OA = −1 Eqn line through B with grad 1 is $y = x + 2$. Intersection of $y = -x$ and $y = x + 2$ is (−1,1).	A M	Must have y=x+2 to get Merit.	
		3	Show that two gradients are perpendicular. Grad AB $\frac{2-1}{3-1} = \frac{1}{2}$ Grad BC $\frac{8-2}{0-3} = -2$ Lines AB and BC are perpendicular because gradAB × gradBC =−1	A M	(both gradients) or (all 3 lengths) Statement required.	

EXCELLENCE	Solve extended problems involving coordinate geometry methods.	4	Slope of AB $\dfrac{-5}{k-8}$ Perpendicular grad is $\dfrac{k-8}{5}$ Midpoint is $\left(\dfrac{8+k}{2}, \dfrac{-3}{2}\right)$ Line passes through $(0, -3)$ and midpoint which gives: $\dfrac{-15}{2} + 15 = k\left(\dfrac{8+k}{2}\right) - 8\left(\dfrac{8+k}{2}\right)$ $15 = 8k + k^2 - 64 - 8k$ $79 = k^2$ $k = \pm\sqrt{79}$	M E	Must have supporting working and a logical argument. (both gradient and mid pt)	Excellence: Merit plus E

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Achievement	Achievement with Merit	Achievement with Excellence
Use coordinate geometry methods. $2 \times A$	Solve problems involving coordinate geometry methods. Achievement *plus* $2 \times M$ **OR** $3 \times M$	Solve extended problems involving coordinate geometry methods. Merit *plus* $1 \times E$