Assessment Schedule – 2008

Mathematics CAS: Demonstrate an understanding of processes involving trigonometry and coordinates (90808)

Evidence Statement

	Assessment Criteria	No.	Evidence	Code	Judgement	Sufficiency
ACHIEVEMENT	Demonstrate an understanding of processes involving trigonometry and coordinates.	1 2(a) 4	$b = 1 - \left(\frac{16}{c-3}\right)$ $p = 2$ A distance found or equality statement given such as d not equal to 4 or AC > AB or AC > BC	A A A	Or equivalent statements.	**ACHIEVEMENT:** Two of Code A.
MERIT	Demonstrate an understanding of processes involving trigonometry and coordinate problems using a combination of techniques.	2(b) 3 4	$(q-2)^2 + (r-3)^2 = 144$ $2r = 5q - 4$ $r = 2.5q - 2$ $(q-2)^2 + (2.5q - 2 - 3)^2 = 144$ $29q^2 - 116q - 115 = 0$ $q = 6.46$ or -2.46 So $r = 14.15$ or -8.14 So Q is (6.46,12.12) or (–2.46,–8.14) Gradient statements $\frac{k}{4} = -\frac{2}{5}$ $k = -\frac{8}{5}$ $d^2 - 6d + 2 > 0$ $d > 5.65$, $d < 0.35$	A M E A M M		**ACHIEVEMENT WITH MERIT:** Two of code M

EXCELLENCE	Demonstrate an understanding of processes involving trigonometry and coordinates using a combination of techniques, and using a chain of reasoning.	4 5 6	d > 5.65 Perp 2 = $-k + c$ $c = 2 + k$ $y = -x + (2 + k)$ Intersect $\frac{(k-2)}{2}, \frac{(6+k)}{2}$ $(k + 2)^2 + (k + 2)^2 = 4 \times 16$ $k = 3.7$ or -7.66 Angle = 2.44 Area = 1296 cm^2 Volume = 145 100 cm^3 = 145.1 L	E A A/M A/M E A M E		**ACHIEVEMENT WITH EXCELLENCE:** M AND one code E OR Two of code E.

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate an understanding of processes involving trigonometry and coordinates. 2 × A	Demonstrate an understanding of processes involving trigonometry and coordinate problems using a combination of techniques. 2 × M	Demonstrate an understanding of processes involving trigonometry and coordinates using a combination of techniques, and using a chain of reasoning. Merit plus 1 × E OR 2 × 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.