

## **NOTICE TO CENTRES**

FAO: Heads of Maths; Maths departments; Examination Officers

Date: January 2009

Subject: Formulae Sheet for 6989 Foundations of Advanced Mathematics (MEI)

### **FREE STANDING MATHEMATICS QUALIFICATION (INTERMEDIATE) 6989 FOUNDATIONS OF ADVANCED MATHEMATICS (MEI)**

#### **FORMULAE SHEET**

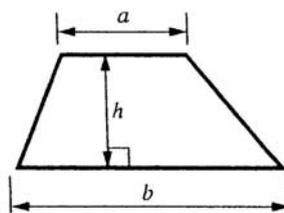
From June 2009 onward we will include a Formulae Sheet for the above qualification. The Formulae Sheet will be printed on page two of the question paper and will contain similar formulae to other level two qualifications in mathematics.

Please find the attached copy of this new Formulae Sheet.

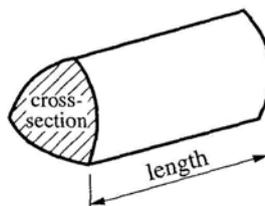
Any enquiry about this notice should be referred to the OCR Customer Contact Centre, (01223 553998), OCR, 1 Hills Road, Cambridge, CB1 2EU.

## Formulae Sheet: 6989 Foundations of Advanced Mathematics (MEI)

$$\text{Area of trapezium} = \frac{1}{2}(a+b)h$$



$$\text{Volume of prism} = (\text{area of cross-section}) \times \text{length}$$

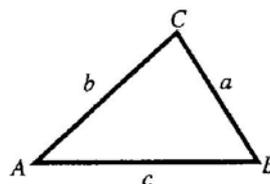


In any triangle  $ABC$

$$\text{Sine rule} \quad \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

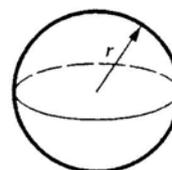
$$\text{Cosine rule} \quad a^2 = b^2 + c^2 - 2bc \cos A$$

$$\text{Area of triangle} = \frac{1}{2}ab \sin C$$



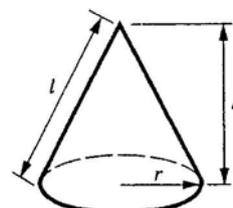
$$\text{Volume of sphere} = \frac{4}{3}\pi r^3$$

$$\text{Surface area of sphere} = 4\pi r^2$$



$$\text{Volume of cone} = \frac{1}{3}\pi r^2 h$$

$$\text{Curved surface area of cone} = \pi r l$$



**The Quadratic Equation**

The solutions of  $ax^2 + bx + c = 0$ ,  
where  $a \neq 0$ , are given by

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$