

©ROSE SOFTWARE - "O" Level Mathematics Series

The TRIGONOMETRY cassette consists of two teach, test-andhelp programs for the 48K Spectrum.

These two programs take the student from an explanation and test of basic trigonometrical functions through to the more advanced techniques and formulae leading to typical "O" level questions.

Throughout the fourteen separate topics into which the programs are divided, the student is tested on his knowledge as he is taught. Special "help" facilities are available should the current problem prove difficult, and the function of a mathematical calculator has been provided to facilitate the accurate calculation of the answers. Where possible the problems are taken from real life and not just presented as theoretical concepts.

Topics covered include:-



b) Two special triangles

SIN, COS and TAN of angles 30°, 45° and 60° can be expressed in surd form by drawing a right-angled isosceles triangle and an equilateral triangle as follows:-



Turn in a clockwise direction through 210° to face C.

The bearing is 210°

e) Angles greater than 90°

In the 1st. quadrant ie: angles less than 90°, all ratios are +ve. In the 2nd. quadrant, SIN only is +ve. In the 3rd. quadrant, TAN only is +ve. In the 4th. quadrant, COS only is +ve.



f) Plan and elevation

The plan and elevation of an object are the views seen from above and from the side or end respectively.



h) Latitude and longitude

Point B has longitude 60°W



The same point B lies on the line of latitude 45°N

B 45° S

i) Identities and formulae

In order to solve non right-angled triangles, use either the SINE RULE:-

$$\frac{a}{SINA} = \frac{b}{SINB} = \frac{c}{SINC}$$

or the COSINE RULE:-

 $a^2 = b^2 + c^2 - 2bc COS A$

The area of a triangle is given by the formula:- Area = $\frac{1}{2}$ ab SIN C An identity to remember is:- SIN² A + COS² A = 1

USE OF CALCULATOR:-

The function of a calculator has been provided in these two programs. When using this facility, it is important to use brackets correctly.

For example:-

SIN 50.3/10.2 is not the same as SIN (50.3/10.2)

When calculating answers using the COSINE RULE, you may key in for example:-

SQR (144 + 81 - 2*12*9* COS 29)

Remember to use the SIN key and the SQR key etc.

TO LOAD A PROGRAM:-

Ensure the heads of your cassette deck are clean and demagnetised Key in

LOAD " " and press ENTER

OTHER TITLES PUBLISHED BY ROSE SOFTWARE INCLUDE:-"O" Level Maths Revision - GEOMETRY

"O" Level Maths Revision - GEOMETRY "O" Level Maths Revision - EQUATIONS & INEQUALITIES

"O" Level French Vocabulary Revision

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