

An Roinn Oideachais
JUNIOR CERTIFICATE EXAMINATION, 1995

MATHEMATICS - ORDINARY LEVEL - PAPER 2 (300 marks)

FRIDAY, 9th JUNE, MORNING - 9.30 to 12.00.

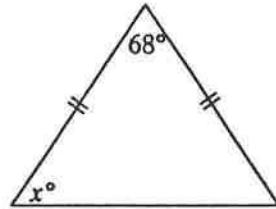
Attempt **QUESTION 1** (100 marks) and **FOUR** other questions (50 marks each).

Marks may be lost if necessary work is not clearly shown.

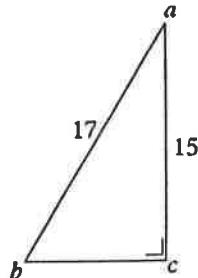
Mathematics Tables may be obtained from the Superintendent .

1. (i) Add $72^\circ 53'$, $56^\circ 49'$ and $50^\circ 18'$.

- (ii) Calculate the value of x in the diagram.

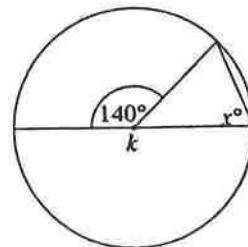


- (iii) Calculate $|bc|$ in the triangle shown.



- (iv) k is the centre of the circle.

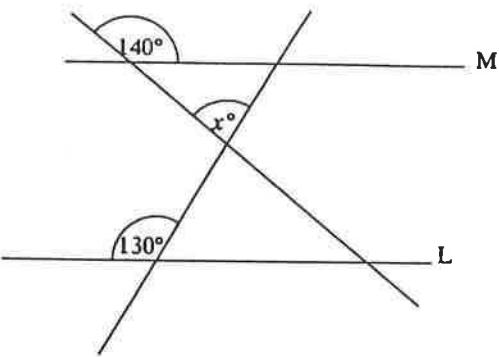
Find the value of x .



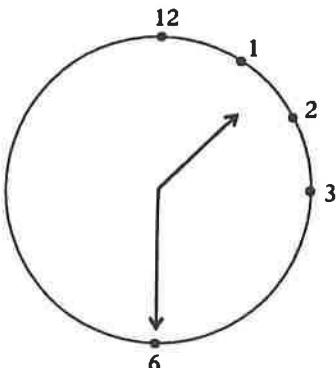
- (v) In a parallelogram $pqrs$, the area of the triangle pqr is 19 cm^2 .

Find the area of the parallelogram.

- (vi) L and M, in the diagram, are parallel lines.
Find the value of x .



- (vii) A circular clock shows the time to be half past one.
What time would the hands show under an axial symmetry in the line joining twelve and six?



- (viii) Find the coordinates of the point in which the line $y = 2x + 2$ intersects the y axis.

- (ix) Prove that the points (2, 3), (3, 4) and (4, 5) are in a straight line.

$$\text{Slope formula: } m = \frac{y_2 - y_1}{x_2 - x_1}.$$

- (x) $\sin A = 0.6086$. Use the book of Tables to find $\cos A$.

2. (a) A carpet costing IR£345 was reduced in a sale by 15%.
What was the sale price?

- (b) The lengths of the sides of a rectangle are 8 cm and 6 cm. Calculate the length of a diagonal.

This rectangle touches the circle at four points, as shown in the diagram. Find the area of the circle given $\pi = 3.14$.

- The circle touches a square at four points, as shown.
(i) Write the length of a side of the square.
(ii) Express the area of the rectangle as a percentage of the area of the square.

