

An Roinn Oldeachais
JUNIOR CERTIFICATE EXAMINATION, 1995

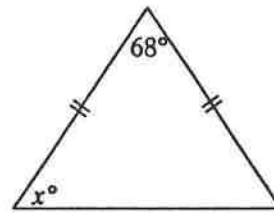
MATHEMATICS - ORDINARY LEVEL - PAPER 2 (300 marks)

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

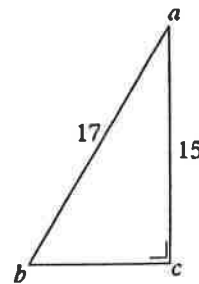
Attempt **QUESTION 1** (100 marks) and **FOUR** other questions (50 marks each).
Marks may be lost if necessary work is not clearly shown.
Mathematics Tables may be obtained from the Superintendent .

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

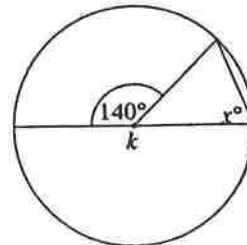
- (ii) Calculate the value of x in the diagram.



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

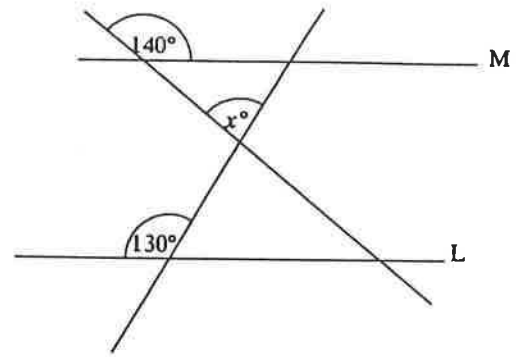


- (iv) k is the centre of the circle.
Find the value of x .

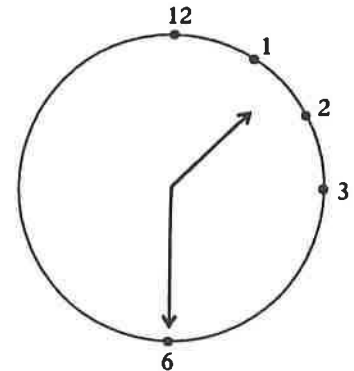


- (v) In a parallelogram $pqrs$, the area of the triangle pqr is 19 cm^2 .
Find the area of the parallelogram.

- (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.

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.

