

# Algebra: Maths Olympiad

G V V Sharma\*

1. ABC is an isosceles triangle with  $AB = AC$ .  
Suppose that
2. M is the midpoint of BC and O is the point on the line AM such that OB is perpendicular to AB;
3. Q is an arbitrary point on the segment BC different from B and C;
4. E lies on the line AB and F lies on the line AC such that E, Q, F are distinct and collinear.

\*The author is with the Department of Electrical Engineering, Indian Institute of Technology, Hyderabad 502285 India e-mail: gadepall@iith.ac.in. All content in this manual is released under GNU GPL. Free and open source.