- (b) If D lies on BC produced so that DEF is a straight line, prove that P also lies on the circumcircle of the triangle ABC.
- 6. A n digit number is narcissistic if the sum of its digits each raised to the power of equals the number. Show that there are no 2-digit narcissistic numbers.

Senior Questions

- 1. Show that the function $f(x) = (x + 1) \ln 10 + x \ln 9 + \ln x$ is positive for all x + N for some N.
- 2.