

## PROBLEMS FOR SOLUTION

P 62. Find the region to which  $f(z) = \frac{1}{1-z}$  can be continued in  $n+1$  steps by the power series method, starting from the origin.

Z. A. Melzak, McGill University

P 63. At time  $t=0$ ,  $n$  small perfectly elastic balls of mass  $m$  are situated at the points  $x=1, 2, \dots, n$  on a line, and the  $i$ -th ball has velocity  $v_i$  where  $v_i$  is at random  $0 < v_i \leq 1$ . Find (a) the equation of motion of each ball, (b) the maximum number of impacts, (c) the average number of impacts.

Z. A. Melzak, McGill University

P 64. Find all solutions of

$$\tan^{-1} 1 + \tan^{-1} 2 + \dots + \tan^{-1} n = \frac{k\pi}{2}$$

Leo Moser, University of Alberta

P 65. Given more than 4 lines in the projective plane, no three concurrent, prove that not all the polygons that are formed are triangles and quadrilaterals.

Leo Moser, University of Alberta