

The first part of the paper is devoted to a study of the
 properties of the function  $f(x)$  defined by the
 equation
 
$$f(x) = \sum_{n=1}^{\infty} \frac{1}{n^2} \cos \frac{2\pi n x}{1-x}$$
 for  $0 < x < 1$ . It is shown that  $f(x)$  is
 continuous on the interval  $(0, 1)$  and that
 it has a jump discontinuity at  $x=1$ . The
 value of the jump is found to be  $\frac{1}{6}$ .

In the second part of the paper, we consider the
 function  $g(x)$  defined by the equation
 
$$g(x) = \sum_{n=1}^{\infty} \frac{1}{n^3} \cos \frac{2\pi n x}{1-x}$$
 for  $0 < x < 1$ . It is shown that  $g(x)$ 
 is continuous on the interval  $(0, 1)$  and
 that it has a jump discontinuity at  $x=1$ .
 The value of the jump is found to be  $\frac{1}{12}$ .

Finally, we consider the function  $h(x)$  defined
 by the equation
 
$$h(x) = \sum_{n=1}^{\infty} \frac{1}{n^4} \cos \frac{2\pi n x}{1-x}$$
 for  $0 < x < 1$ . It is shown that  $h(x)$ 
 is continuous on the interval  $(0, 1)$  and
 that it has a jump discontinuity at  $x=1$ .
 The value of the jump is found to be  $\frac{1}{24}$ .