

**166.** A discrete probability distribution has the following properties:

(i) 
$$p_k = c \left( 1 + \frac{1}{k} \right) p_{k-1} \quad \text{for } k = 1, 2, \dots$$

(ii) 
$$p_0 = 0.5$$

Calculate  $c$ .

(A) 0.06

(B) 0.13

(C) 0.29

(D) 0.35

(E) 0.40