196. For a special increasing whole life annuity-due on (40), you are given:

(i) Y is the present-value random variable.

(ii) Payments are made once every 30 years, beginning immediately.

(iii) The payment in year 1 is 10, and payments increase by 10 every 30 years.

(iv) ${}_t p_0 = 1 - \frac{t}{110}, 0 \le t \le 110$

(v) $i = 0.04$

Calculate $\text{Var}(Y)$.

(A) 10.5

(B) 11.0

(C) 11.5

(D) 12.0

(E) 12.5