

21.

Payments are made to an account at a continuous rate of $(8k + tk)$, where $0 \leq t \leq 10$.

Interest is credited at a force of interest $\delta_t = \frac{1}{8+t}$.

After 10 years, the account is worth 20,000.

Calculate k .

- (A) 111
- (B) 116
- (C) 121
- (D) 126
- (E) 131