

133.

$$P(40 < T < 50 | T > 40)$$

$$= \frac{P(40 < T < 50)}{P(T > 40)} \times 5000 = E(\text{Payment})$$

$$P(40 < T < 50) = F(50) - F(40)$$

$$= \left[1 - e^{-\frac{1-1.1^{50}}{1000}} \right] - \left[1 - e^{-\frac{1-1.1^{40}}{1000}} \right]$$

$$= 0.109873 - 0.043294$$

$$= 0.066579$$

$$P(T > 40) = 1 - F(40)$$

$$= 1 - \left[1 - e^{-\frac{1-1.1^{40}}{1000}} \right]$$

$$= 0.956706$$

$$\frac{P(40 < T < 50)}{P(T > 40)} = \frac{0.066579}{0.956706}$$

$$= 0.069592$$

$$0.069592 \times 5000 = \$347.96 \Rightarrow \boxed{B}$$