13. Solution: E

$$\int \frac{t^2}{100} dt = \frac{t^3}{300}$$

So accumulated value at time 3 of deposit of 100 at time 0 is:

$$100e^{t^3/300\Big]_0^3} = 109.41743$$

The amount of interest earned from time 3 to time 6 equals the accumulated value at time 6 minus the accumulated value at time 3. Thus

$$(109.41743 + X)e^{t^3/300\Big]_3^6} - (109.41743 + X) = X$$

$$(109.41743 + X)(1.8776106) - 109.41743 - X = X$$

$96.025894 = 0.1223894\ X$

$X = 784.59$