Average Bank Balance

An amount of money A_0 compounded continuously at interest rate r increases according to the law:

$$A(t) = A_0 e^{rt} \qquad (t\text{=time in years.})$$

a) What is the average amount of money in the bank over the course of T years?

b) Check your work by plugging in $A_0 = \$100$, $r = .05$ and $T = 1$; does the result seem plausible?

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