Compound Interest Problems   A.P. Calculus

Use the compound interest formulas below to solve the following problems.

$$A_t = P\left(1 + \frac{r}{k}\right)^{kt} \qquad\qquad A_t = Pe^{rt}$$

1. Determine the effective annual yield of an investment at 4% compounded quarterly.

2. Determine the effective annual yield of an investment at 4% compounded continuously.

3. Determine the effective annual yield of an investment at 4.25% compounded annually.

4. If you invest $3,500 at 8.25% compounded continuously, how many years will it take for the investment to be worth $5,000?

5. If you invest $3,000 at 7.2% compounded continuously, how many years will it take for the investment to be worth $10,000?

6. . If you invest $11,500 at 8.3% compounded monthly, how many years will it take for the investment to be worth $20,000?

7. . If you invest $1,000 at 5% compounded quarterly, how many years will it take for the investment to double?

8. A sum of money invested at a fixed interest rate, compounded continuously, tripled in 19 years. Determine the interest rate at which the money was invested.