Rate of Return

Use the formula and compute manually. Show your work (at least your initial equation).

$A = P(1 + r/n)^{nt}$

A = amount (ending amount)

P = principle (beginning amount)

r = interest rate, expressed as a decimal
(5% = .05, 6½% = .065)

n = number of times per year the interest is compounded

$FV = PV(1 + r/m)^{mt}$

FV = future value

PV = present value

r = interest rate, expressed as a decimal
(15% = .15, 7¼% = .0725)

m = number of times per year the interest is compounded

annually =
semiannually =
quarterly =
monthly =
weekly =
daily =

1. You save/invest $500 for 15 years at 6% compounded annually. How much money will you have in 15 years?

2. You save/invest $500 for 15 years at 6% compounded weekly. How much money will you have in 15 years?

3. You save/invest $2500 at 4% for 30 years compounded quarterly. How much money will you have in 30 years?

4. You save/invest $2500 at 9% for 30 years compounded quarterly. How much money will you have in 30 years?

5. You save/invest $5000 for 40 years at 5% compounded semiannually. How much money will you have in 40 years?

6. You save/invest $5000 for 40 years at 12% compounded monthly. How much money will you have in 40 years?

7. You get $750 from friends/relatives at graduation and decide to save/invest the money. How much interest will you have earned by retirement (age 65) if your money was compounded daily at 8%?

Use the online investing calculator at foundationsU.com.

8. After an initial deposit of $500, you save/invest $50 per month for the next 25 years at 4%. How much money will you have in 25 years?

9. After an initial deposit of $500, you save/invest $50 per month for the next 40 years at 10%. How much money will you have in 40 years?

10. After an initial deposit of $250, you save/invest $100 per month for the next 30 years at 8%. How much money will you have in 30 years?

11. After an initial deposit of $250, you save/invest $75 per month for the next 40 years at 8%. How much money will you have in 40 years?

12. After an initial deposit of $_____, you save/invest $_____ per month for the next _____ years at _____%. How much money will you have in _____ years?