Name: _____ Date: _____

Section 9.2 Investment Alternatives

1. Complete the table.

r	CompoCundingFrequency	*i*	*i* (decimal)
10%	quarterly		
–12%	Monthly		
2.4%			0.006
–0.6%	semi-annually		
	monthly	0.4%	

2. Find the future value of each investment. Assume interest is compounded annually and that each investment has a 2% management fee. Use a TVM Solver to check your work.
- **a)** $2000 in a fund that averages 6.7% growth per year over 4 years
- **b)** $8000 in a fund that averages 2.8% growth per year over 8 years
- **c)** $750 in a fund that averages 14.15% growth per year over 5 years
- **d)** $14 000 in a fund that averages 11.5% growth per year over 10 years

3. Refer to question 2. Calculate the amount of interest earned on each investment.

4. Find the future value of each investment. Assume each investment has a 1.5% management fee and that interest is compounded annually.
- **a)** $2150 in a fund with an annual rate of return of –2.6% after 3 years
- **b)** $895 in a fund with an annual rate of return of –0.1% after 2 years
- **c)** $1145 in a fund with an annual rate of return of –1.1% after 5 years
- **d)** $6275 in a fund with an annual rate of return of –1.5% after 4 years

5. Refer to question 4. Calculate the total loss on each investment.

6. On Bian's fifth birthday, her parents started an investment fund. They deposited $1500 each year at an annual rate of return of 4.15% compounded annually. Find the amount of this investment on Bian's 15th birthday. Use a TVM Solver.

7. On her 16th birthday, Ramona said she will invest $100 every month until she turns 56. Assume there are no management fees and that interest is compounded monthly. Calculate the value of Ramona's investment on her 56th birthday for each average annual rate of return.
- **a)** 4%
- **b)** 6%
- **c)** 8%
- **d)** 10%

8. Pedro has $7000 to invest in a mutual fund. The fund has a management fee of 1.8% and interest is compounded annually. Pedro leaves the investment untouched for 4 years. Calculate the value of the investment at the end of each year.
- **a)** Year 1: annual rate of return –1.3%
- **b)** Year 2: annual rate of return 5.7%
- **c)** Year 3: annual rate of return 18.3%
- **d)** Year 4: annual rate of return 4.2%

Name: _____ Date: _____

9. The RESP program allows families to invest for a child's education. The Federal government contributes 20% of the invested amount. Interest is earned on the amount invested and the government's contribution. On each birthday from her 1st to her 18th, Neha's parents contributed the maximum amount of $2000 per year to her RESP.

a) How much per year did the government contribute to Neha's RESP?

b) What was the total amount invested each year?

c) The RESP investment had a 2% management fee and an average annual rate of return of 8.8%, compounded yearly. What is the value of the RESP on Neha's 18th birthday?

d) What is the total amount of interest earned in the 18 years?

10. Give one example of a high-risk investment and one example of a low-risk investment. Explain the risk of each investment.

11. William invests $2500 in a plan with a graduated annual rate of return. Interest is compounded monthly. In the first year, the annual rate of return is 4%. In the second year, the annual rate of return is 4.85%.

a) Find the value of the investment at the end of the first year.

b) Find the value of the investment at the end of the second year.

c) If the value of the investment at the end of the second year is $3500 or greater, it can be kept for a third year at an annual rate of return of 5.5%. How much does William need to add to the investment to qualify for the increased rate of return?

d) Refer to your answer from part c). William adds this amount to his investment to qualify for the 5.5% rate of return. How much will William's investment be worth after the third year?