Hw #8 Solutions

1.

Month	Previous Balance	Interest	Deposit	New Balance			
1		0	150	150		Sum of Deposits	
2	$ 150.00	$ 0.75	$ 150.00	$ 300.75		3600	
3	$ 300.75	$ 1.50	$ 150.00	$ 452.25			
4	$ 452.25	$ 2.26	$ 150.00	$ 604.52			
5	$ 604.52	$ 3.02	$ 150.00	$ 757.54			
6	$ 757.54	$ 3.79	$ 150.00	$ 911.33			
7	$ 911.33	$ 4.56	$ 150.00	$ 1,065.88			
8	$ 1,065.88	$ 5.33	$ 150.00	$ 1,221.21			
9	$ 1,221.21	$ 6.11	$ 150.00	$ 1,377.32			
10	$ 1,377.32	$ 6.89	$ 150.00	$ 1,534.20			
11	$ 1,534.20	$ 7.67	$ 150.00	$ 1,691.87			
12	$ 1,691.87	$ 8.46	$ 150.00	$ 1,850.33			
13	$ 1,850.33	$ 9.25	$ 150.00	$ 2,009.59			
14	$ 2,009.59	$ 10.05	$ 150.00	$ 2,169.63			
15	$ 2,169.63	$ 10.85	$ 150.00	$ 2,330.48			
16	$ 2,330.48	$ 11.65	$ 150.00	$ 2,492.13			
17	$ 2,492.13	$ 12.46	$ 150.00	$ 2,654.60			
18	$ 2,654.60	$ 13.27	$ 150.00	$ 2,817.87			
19	$ 2,817.87	$ 14.09	$ 150.00	$ 2,981.96			
20	$ 2,981.96	$ 14.91	$ 150.00	$ 3,146.87			
21	$ 3,146.87	$ 15.73	$ 150.00	$ 3,312.60			
22	$ 3,312.60	$ 16.56	$ 150.00	$ 3,479.16			
23	$ 3,479.16	$ 17.40	$ 150.00	$ 3,646.56			
24	$ 3,646.56	$ 18.23	$ 150.00	$ 3,814.79			

You will have $3814.79 at the end of 24 months. $214.79 is the amount of interest you will have earned.

2.

Month	Previous Balance	Interest	Deposit	New Balance		
1		$ -	$ 318.01	318.01		Deposit
2	$ 318.01	$ 1.33	$ 318.01	$ 637.35		318.01
3	$ 637.35	$ 2.66	$ 318.01	$ 958.01		
4	$ 958.01	$ 3.99	$ 318.01	$ 1,280.01		
5	$ 1,280.01	$ 5.33	$ 318.01	$ 1,603.36		
6	$ 1,603.36	$ 6.68	$ 318.01	$ 1,928.05		
7	$ 1,928.05	$ 8.03	$ 318.01	$ 2,254.09		
8	$ 2,254.09	$ 9.39	$ 318.01	$ 2,581.49		
9	$ 2,581.49	$ 10.76	$ 318.01	$ 2,910.26		
10	$ 2,910.26	$ 12.13	$ 318.01	$ 3,240.39		

You should deposit $318.01 monthly.

3. $29,913.34 at the end of 18 years. $8313.34 will be interest.

4. You would need to deposit $2863.70 every month.

5. The student would have $229439.40 at age 65.

6. Yolanda would have $31,056.46 and Zach would have $30,186.94.

7. Jeff would have $65,551.74, Maria would have $67,472.11.

8. a) At the end of 10 years Mitch had $12,577.89. It grew without additional deposits to $88548.20 over the next 40 years. Bill ends up with $66,438.85.

b) Mitch deposited $10,000 and Bill deposited $30,000.

9. a) If you withdraw $6443.01 you will have $2.78 left at the end of 30 years.

	A	B	C	D	E
1	Month	Previous Balance	Interest	Withdrawl	New Balance
2	1	$ 1,000,000.00	$5,000.00	$ 6,443.01	$ 998,556.99
3	2	$ 998,556.99	$4,992.78	$ 6,443.01	$ 997,106.76
4	3	$ 997,106.76	$4,985.53	$ 6,443.01	$ 995,649.29
5	4	$ 995,649.29	$4,978.25	$ 6,443.01	$ 994,184.53
6	5	$ 994,184.53	$4,970.92	$ 6,443.01	$ 992,712.44
7	6	$ 992,712.44	$4,963.56	$ 6,443.01	$ 991,232.99
8	7	$ 991,232.99	$4,956.16	$ 6,443.01	$ 989,746.14

b. $5995.51
c. $5701.90

10. a) $59,580.81
b) $83,413.14

11. a) $3029.90
b) $299,263.92
c) $2213.62