Assignment for Ch13.

This assignment will be turned in **individually**. **All students** should fill out the answers below and turn in this document file on the class Canvas webpage.

1. Ch.13 Pg 447.

(a) What is the NPV for Project A and Project B? (Just NPV numbers needed. Don't need to include excel calculations)

The expected NPV for both projects is the same and comes out to $29,835.

(b) What is the variance and standard deviation of the NPVs for both projects? Which Projects appears to be riskier? (Just numbers for variance, standard deviations, and response about risk needed)

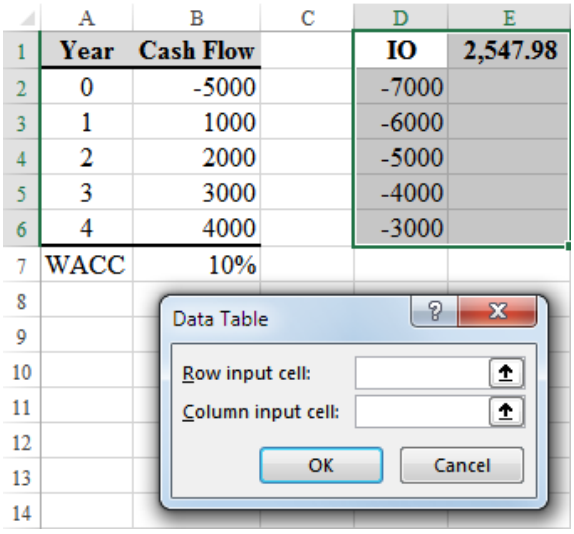
	NPV (A)	NPV (B)
Expected Value:	$29,835	$29,835
Variance	$2,403,361,409	$817,827,883
Standard Deviation	$49,024	$28,598

After calculating variance and standard deviation of both projects, it appears that project A is riskier.

2.

Create a Data Table that calculates the NPV with various initial outlays in D1:E6.

Hint: You need to input B2 into Column input cell.
pg. 400 of textbook and ch.13 Worksheet has a sample.



Initial Outlay	$2,548
-7000	548
-6000	1548
-5000	2548
-4000	3548
-3000	4548

Paste the resulting table into this document file.

3. What is the correct value for the after-tax salvage cash flow in B4?

a) -2,800
b) 47,800
c) 27,000
d) 42,200
e) 45,000

	A	B
1	Salvage Value	45,000
2	Book Value	52,000
3	Tax Rate	40%
4	After-Tax Salvage Value	?

Salvage Value	45000
Book Value	52000
Taxable Amount	-7000
Tax Rate	40%
Taxes	-2800
AT-Cash Flow	47800

4. What is the value of cell B7?

a) 1.80
b) 2.17
c) 2.32
d) 2.50
e) 2.73

	A	B	C
1	Year	Cash Flows	
2	0	(60,000)	
3	1	20,000	
4	2	25,000	
5	3	30,000	
6	WACC	12%	
7	Payback Period		

5. What is the value of cell B7?

a) Payback > Life (Can't recover cost)
b) 1.78
c) 2.09
d) 2.25
e) 2.50

	A	B	C
1	Year	Cash Flows	
2	0	(60,000)	
3	1	20,000	
4	2	25,000	
5	3	30,000	
6	WACC	12%	
7	Disc Payback Period		

6. Which is the right formula for B7?

a) =NPV(B6,B2:B5)
b) =NPV(B6,B3:B5)-B2
c) =NPV(B6,B3:B5)+B2
d) =NPV(B6,B2:B5)+B2
e) =NPV(B6,B2:B5)-B2

	A	B
1	Year	Cash Flows
2	0	(60,000)
3	1	20,000
4	2	25,000
5	3	30,000
6	WACC	12%
7	NPV	?

7. Which is the right formula for B7?

a) =NPV(B6,B2:B5)/-B2
b) =NPV(B6,B3:B5)/-B2
c) =(NPV(B6,B3:B5)+B2)/B2+1
d) =NPV(B6,B3:B5)/B2
e) =PI(B6,B2:B5)

	A	B
1	**Year**	**Cash Flows**
2	0	(60,000)
3	1	20,000
4	2	25,000
5	3	30,000
6	WACC	12%
7	Profitability Index	?

8. What is the expected NPV in C5?

	A	B	C
1	**Scenario**	**Probabilities**	**NPV**
2	Worst Case	0.2	(52,125)
3	Base Case	0.6	27,652
4	Best Case	0.2	107,429
5	Expected NPV		?

The expected NPV is $27,652.