Solution to Case Study, Chapter 7

There is not always a definitive answer to case study exercises. Here are example responses

DEVELOPING AND SELLING AN INNOVATIVE IDEA

	A	B	C	D	E	F
			NCF with sale in year 4 for $500,000	NCF with sale in year 8 for $100,000	NCF with new capital in year 8	Cum
1	Year	NCF, $				NCF, $
2	0	-200,000	-200,000	-200,000	-200,000	-200,000
3	1	55,000	55,000	55,000	55,000	-145,000
4	2	57,750	57,750	57,750	57,750	-87,250
5	3	60,638	60,638	60,638	60,638	-26,613
6	4	63,669	563,669	63,669	63,669	37,057
7	5	40,000		40,000	40,000	77,057
8	6	35,000		35,000	35,000	112,057
9	7	30,000		30,000	30,000	142,057
10	8	25,000		125,000	-175,000	-32,943
11	9	5,000			5,000	-27,943
12	10	10,000			10,000	-17,943
13	11	15,000			15,000	-2,943
14	12	20,000			20,000	17,057
15			47.9%	22.7%	4.7%	
16	ROR after 4 years	7.0%				
17	ROR after 8 years	18.8%				

1. (a) 47.9%; (b) 7.0%

2. (a) 22.7%; (b) 18.8%

3. 4.7%

4. Descartes' rule of signs: 3 sign changes
   Norstrom's criterion; series starts negative; 3 sign changes

   Could be up to 3 roots in the range ±100%.

5. Continue the NCF series starting in year 13. Next 12 years of NCF at 12% has
   PW = $284,621. This is the offer based on these estimates.