Exercise-3

ABSOLUTE AND RELATIVE REFERENCES

NOTE: each of the below exercises use reference points for placement of the model. Please use these reference points when creating your model in Excel so the answers will be the same for everyone. For each answer, only one formula needs to be provided. It is assumed you will copy it to all the other locations.

1.Devise a formula which will compute the INTEREST for the PRINCIPAL amount in column A. Create this formula in such a way so that when it is copied it will compute the correct INTEREST amounts in each row. The formula for INTEREST is the principal amount times the rate.

	A	B
1	RATE:	.14
2		
3	PRINCIPAL	INTEREST
4	1000	Formula
5	1500	
6	2000	
7	2500	
8	3000	
9	3500	

2.Create a formula which will add up the values in each column and add to it the value of 9.99 below (see cell B1). Remember, you need only one formula that will be copied to the other columns.

	A	B	C	D	E
1		9.99			
2					
3	1	5	7	8	10
4	2	10	16	6	20
5	3	15	34	99	30
6	4	20	87	55	40
7	5	25	12	44	50
8	6	30	11	33	60
9	7	35	90	22	70
10	8	40	12	11	80
11	9	45	22	44	90
12					
13	Formula				

3.Create a formula that will compute the total price. The total price is figured by multiplying the PRICE times the NUMBER SOLD. Create this formula in such a way so that when it is copied to the rest of the range it will correctly calculate the total price for each PRICE and NUMBER SOLD combination. You should be able to create one formula that is copied only once to all the cells in one step and calculates correctly.

	A	B	C	D	E	F
1		NUMBER SOLD				
2	PRICE	100	150	200	250	300
3	5	Formula				
4	10					
5	15					
6	20					
7	25					
8	30					
9	35					
10	40					
11						

4.Create a formula that will figure the compounded growth factor for each PRODUCT A-E. This should be figured by multiplying the previous column by the growth factor and adding that result to the previous column amount. Create the formula in such a way so that when it is copied to the rest of the range it will compute the correct values. Again, only one formula, and it could be copied to all the cells in one paste.

	A	B	C	D	E
1	GROWTH	F .03			
2					
3	Product	1	2	3	4	5
4	PROD 1	100	Formula			
5	PROD 2	150				
6	PROD 3	200				
7	PROD 4	250				
8	PROD 5	300				
9						

5.Recreate the following model using appropriate references, formulas, etc. The objective of this exercise is to minimize the use of "hard" numbers and maximize the use of references and formulas (a process which you should always follow in creating a spreadsheet model). Note that the assumptions you require are at the top left of the model. Cost of Goods Sold (CGS) is 56 percent of the Gross sales. The Gross Margin is SALES MINUS the COST OF GOODS SOLD.

	A	B	C	D	E	F	G
1	Initial Sales		1000				
2	Sales Growth Rate		.10				
3	CGS Rate		.56				
4							
5	Year		1985	1986	1987	1988	1989
6	Sales		1,000	1,100	1,210	1,331	1,464
7	Cost of Goods Sold		560	616	678	745	820
8	Gross Margin		440	484	532	586	644
9							