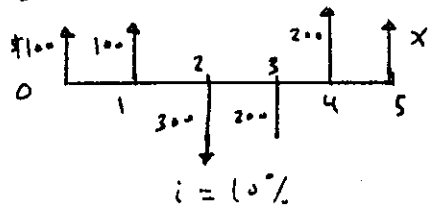


ENMG 400

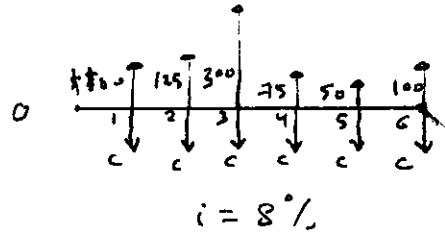
part I

ENMG 400  
Nunayh (3/3)

(10%) 1. a)



Find X.



Find C.

(20%) 2. Consider the three mutually exclusive investment projects. Assume that the MARR = 12%.

projects cash flow

Year	A	B	C
0	-54200	-54000	-52500
1	2610	2500	1500
2	2930	1300	1200
3	1500	1000	800
4	1700	800	700

use the net present worth analysis to select the most attractive investment among the three.

(20%) 3. Consider the following sets of investment projects

projects cash flow

Year	A	B	C	D
0	-52000	-54000	-53000	-59000
1	400	3000	-2000	2000
2	500	2000	4000	4000
3	600	1000	2000	8000
4	700	500	4000	8000
5	800	500	2000	4000

which investment should be selected, use annual cash flow analysis and an MARR = 10%.

25%) 4. Given the following investment projects.

three mutually exclusive alternative

	A	B	C
First cost	\$10,000	\$9000	\$8000
annual benefit	1200	1100	1000
useful life	10 yrs	10 yrs	10 yrs
Salvage value	1500	1200	1000

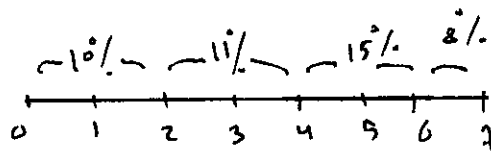
a) compute the IRR for each project.

b) use incremental Rate of return analysis to select the best project among the three.

### part II

please circle the correct answer or supply the answer where appropriate.

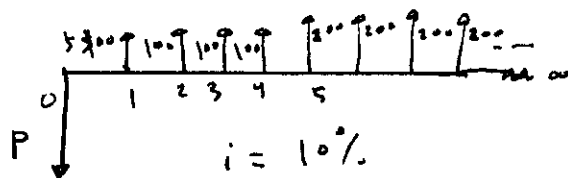
1.



what is the equivalent annual interest?

answer: \_\_\_\_\_

2.



find  $P$ .

answer: \_\_\_\_\_

3. What is the future worth of an equal quarterly payment series of \$2500 for 10 years, if the interest rate is 9% compounded monthly (select the closest answer)

- a) \$158,653      b) \$151,930      c) \$154,718      d) \$160,058      e) none

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4. Consider the investments

Year	A	B	D (monthly)
0	-\$1000	-\$1000	0
1	500	600	0
2	500	400	0
3	176	165	0

Based on the rate of return analysis and ~~an~~ MARR = 12%

- a) select A      b) select B      c) select the D (monthly)

5. An investment of \$10,000 compounded monthly for 36 months gave a future worth of 12,000. What is the effective annual interest rate.

- a) 6.5%      b) 7%      c) 6.8%      d) 6.25%      e) none