

**Note #1** \$60,000 3 year installment note with annual payments and 10% market rate of interest.  
Note made May 1, 2009.

Date	Payment	Interest Expense	Principal	Loan Balance
5/1/09				\$60,000
5/1/10	24,127	6,000	18,127	41,873
5/1/11	24,127	4,873	19,940	21,934
5/1/12	24,127	2,194	21,934	0

5/1/09	(DR) Cash	60,000
	(CR) Note payable	60,000

12/31/09	(DR) Interest expense	4,000
	(CR) Interest payable	4,000

Current liabilities:

Interest payable	4,000
Note payable	18,127

Long term liabilities:

Note payable	41,873
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5/1/11	DR) Interest expense	2,000
	(DR) Interest payable	4,000
	(DR) Note payable	18,127
	(CR) Cash	24,127

**Note #2** Want to borrow \$60,000 by issuing a three year noninterest-bearing note. The market interest rate is 10% and the note will be date May 1, 2009.

PV = \$60,000    r = 10%    c = 1    n = 3    FV = ? = 79,860

Date	Cash Payment	Interest Expense	Discount	(Face Value-Discount) Carrying Value
5/1/09			19,860	\$60,000
5/1/10	0	6,000	13,860	66,000
5/1/11	0	6,600	7,260	72,600
5/1/12	0	7,260	0	79,860

5/1/09                      (DR) Cash                      60,000  
                                   (DR) Discount on N/P    19,860  
                                   (CR) Note payable        79,860

12/31/09                      (DR) Interest expense    4,000  
                                   (CR) Discount on N/P    4,000

CV = Face value – Discount  
      = [79,860 – (19,860 – 4,000)] = 64,000  
      = Note of \$60,000 plus interest of \$4,000

Long term liabilities:

Note payable                      79,860  
 Less: Discount                      15,860  
    64,000

12/31/10                      (DR) Interest expense    6,400  
 (CR)                              Discount on N/P            6,400  
                                   6,400 = (6,000 x 4/12) + (6,600 x 8/12)

**Note #3** Three-year note with a \$60,000 face value and a 8% face rate that is paid annually.

The market rate of interest on the day the note is issued (May 1, 2009) is 10%.

FV = 60,000    PMT = 4,800     $r = 10\%$      $c = 1$      $n = 3$     PV = ?

Cash flows:

\$4,800 x 3 years, plus

\$60,000

Date	Cash Interest	Interest Expense	Discount Amortization	Discount	Carrying Value
5/1/09				2,984	57,016
5/1/10	4,800	5,702	902	2,082	57,918
5/1/11	4,800	5,792	992	1,090	58,909
5/1/12	4,800	5,891	1,090	0	60,000
	<u>14,400</u>	<u>17,384</u>	<u>2,984</u>		

## Cost of borrowing:

Cash paid 74,400 =  $[(4,800 \times 3) + 60,000]$ 

Cash received 57,016

17,384

5/1/09

(DR) Cash 57,016

(DR) Discount on N/P 2,984

(CR) Note payable 60,000

12/31/09

(DR) Interest expense 3,801  $(5,702 \times 8/12)$ (CR) Discount on N/P 600  $(901 \times 8/12)$ (CR) Interest payable 3,200  $(4,800 \times 8/12)$ Current liabilities:

Interest payable 3,200

## Long term liabilities:

Note payable 60,000

Less: Discount 2,38357,617

5/1/10

(DR) Interest expense 1,901  $(5,702 \times 4/12)$ (DR) Interest payable 3,200  $(4,800 \times 4/12)$ (CR) Discount on N/P 301  $(901 \times 4/12)$ 

(CR) Cash 4,800

**Note #4** Three-year note with a \$60,000 face value and a 8% face rate that is paid annually. The market rate of interest on the day the note is issued (May 1, 2009) is 6%.

FV = 60,000    PMT = 4,800     $r = 6\%$      $c = 1$      $n = 3$     PV = ?

Cash flows:

\$4,800 x 3 years, plus

\$60,000

Date	Cash Interest	Interest Expense	Premium Amortization	Premium	Carrying Value
5/1/09				3,207	63,208
5/1/10	4,800	3,792	1,008	2,200	62,200
5/1/11	4,800	3,732	1,068	1,132	61,132
5/1/12	4,800	3,668	1,132	0	60,000
	<u>14,400</u>	<u>11,192</u>	<u>3,208</u>		

## Cost of borrowing:

Cash paid 74,400 =  $[(4,800 \times 3) + 60,000]$ 

Cash received 63,208

11,192

5/1/09

(DR) Cash 63,208

(CR) Premium on N/P 3,208

(CR) Note payable 60,000

12/31/09

(DR) Interest expense 2,528  $(3,792 \times 8/12)$ (DR) Premium on N/P 672  $(1,008 \times 8/12)$ (CR) Interest payable 3,200  $(4,800 \times 8/12)$ Current liabilities:

Interest payable 3,200

Long term liabilities:

Note payable 60,000

Plus: Premium 2,536

62,536

5/1/10

(DR) Interest expense 1,264  $(3,792 \times 4/12)$ 

(DR) Interest payable 3,200

(DR) Premium on N/P 336  $(1,008 \times 4/12)$ 

(CR) Cash 4,800