Appendix A: Algebra for Transactioneers

Have you ever noticed that the older you get, the smarter your parents get?

Case in point: remember when they made you take algebra in junior high, despite the 100% agreement of every single one of your classmates that it was completely useless, and that you'd never use it in the real world?

Well, guess what? You're about to use it. But this time, it won't be to figure out when the trains meet, or how far apart they are in 2 hours, but in real-life, money-making, word problems like this one:

A few years ago, a major local competitor of mine called to pass on a deal to me.

This gentleman is a wholesaler, so getting a call from him isn't all that unusual; what was strange about this particular contact was that he was looking not for a flip fee but for a referral fee.

It seems he had been negotiating with a seller to buy a home with no money down. The seller's underlying mortgage had a balance of $13,000, with payments of $352 per month and 12 years remaining. My competitor had negotiated a purchase price of $35,000 with payments of $352 per month for 30 years amortization. The seller agreed, and was ready to close ASAP.

The problem? The investor couldn't figure out the interest rate on a land contract with the terms he'd negotiated! He was too embarrassed to tell this to the seller, and apparently too embarrassed to ask me to figure it out for him. I ended up paying him $500 for referring a deal that ultimately made me over $17,000.

If there's a lesson here, it's that you'll pass up profits if you don't understand how to do some basic math. And by "do", I don't mean whip out the advanced math of:

$$A=P(1 + r/n)^{nt}$$

(don't panic; that's the last time you'll actually see an actual mathematical formula in this chapter, because, calculators.)

What I mean is that you must:

1. Understand what the nature of the question you're trying to answer is and

2. Understand how to plug the appropriate numbers into a financial calculator, calculator app, or excel spreadsheet to get the answer you need.

Take this question, for instance:

You've bought a property with a seller-held loan at 8% interest. The original loan balance was $100,000, with a 30 year term and payments of $733.76/month.

It's now 14 months later, and the seller's situation has changed; he wants to cash out of the loan. You'd like to help him, and you know some note buyers who'd definitely buy his loan at a 14% rate of return (in other words, at a discount over the current face value), but at the same time you'd like to see if the discount is big enough to entice YOU to pay it off at that price. So: what would the loan be worth to such a note buyer?

As you can see, only part of the question is the calculation itself; the rest of it is knowing what you're calculating FOR[1]. We'll come back to part one—and the question itself—later.

As to part 2, all you have to do is learn to use one of the several financial calculators, financial calculation apps, or plain old excel spreadsheet functions that do these calculations for you.
You don't need to understand how the math works—you just have to know how to enter the right data.

Whatever the outcome of your high-school algebra experience[2], with modern technology, you can EASILY solve almost any financial conundrum with which you are presented. Which means, more importantly, that you can come up with a real, solid, solution to real problems that real sellers have. In fact, the ability to effectively use your financial calculator will allow you to:

- Figure the payments on a loan, if you know the interest rate, beginning balance, and term;
- Figure the interest rate on a seller-held mortgage, if you've agreed on a payment, price, and term;
- Figure out the balloon payment on a mortgage or land contract;
- Figure the return on cash invested on any property;
- Analyze the cost of adjustable rate vs. fixed rate mortgages;
- Figure out approximately how much a seller owes on a property--without asking;
  ..and other useful and interesting stuff.

[1] In this case, it's the present value of a note with payments of $733.76 a month for 346 months at 12% interest

[2] Mine was the first "D" of my life, and a very, very disappointed engineer father.

Step one: Decide on your tool of choice

For many years, I carried a financial calculator[3] everywhere I went, for the express purpose of doing creative deals on the fly. Today, I have a financial calculator app for my iPhone (PowerOne, in case you're wondering) for those occasional on-the-fly Transactioneering experiences, but my tool of choice these days is absolutely, without a doubt, Microsoft Excel.

Why Excel?

Because with a financial calculator, each and every calculation you do requires a new setup. If you need to, for instance, calculate the payment on a certain loan at a certain interest rate, and then figure out what the balloon payment on that note will be in 5 years, and then compare it with a the same loan at a different rate, or a different loan at the same rate, you have to start all over with the each time, and write down your answers, and if you need them again in 3 weeks when the seller finally decides to carry financing, well, I hope you saved those answers somewhere, because if not you'll do the whole thing yet again.

With Excel, you can set up a spreadsheet that compares your outcomes side by side, and then SAVE that spreadsheet with the property name in the title, and then go back and look at it anytime you need to. What's more, you can set up templates for calculations that you do all the time, like this one that compares the profits on a property, that might rent for $550 vs. $600 when that property is purchased with a private loan vs. a partner:

[3] You should use any tool that you're already comfortable with, as long as it's sophisticated enough to allow you to calculate any of the variables of a mortgage loan, by knowing the others. Most amortization tables and free online "mortgage calculators" are not up to this task—they'll only let you calculate the payment from the balance and interest rate, not the balance from the payment and interest rate, as you'll sometimes need to do.

There are lots of financial calculators available. For many years, I used the Texas Instruments BA-35. Another inexpensive and easy-to-use choice is the HP10BII or 10BII+. They are available at office supply stores everywhere. They're similar in their usage, with the main difference being that the BA-35 requires that you divide the annual interest rate by 12 and enter the number of months of a payment stream to get the correct result; the HP uses the annual rate and number of years, and assumes that the interest is compounded monthly.

	A	B	C	D	E	F	G	H	I
2		our insurance rate							
3		assumes 30% in mgmt/main to account for cost of management							
4		assumes borrowing repair money							
5	rent	$ 550.00	$ 600.00						
6	tax (after adjustment)	$ 20.00	$ 20.00						
7	utilities								
8	insurance	$ 40.00	$ 40.00	factor:	single family	0.3			
9	mgmt	$ 165.00	$ 180.00		2-4 family	0.4			
10		$ 325.00	$ 360.00						
11	less CF	$ (200.00)	$ (200.00)		single family	$200			
12	net avail for mtg	$ 125.00	$ 160.00		2-4 family	150 per unit			
13									
14	Purchase price	$5,000.00	$5,000.00						
15	plus repairs	$ 30,000.00	$ 30,000.00						
16	mortgage amount	$ 35,000.00	$ 35,000.00						
17	payment	($545.52)	($545.52)		rate	0.08			
18					term	84			
19	5 year loan analysis						Partnership analysis		
20	**Rent**	$ 550.00	$ 600.00				**Rent**	$ 550.00	$ 600.00
21	taxes	$ 20.00	$ 20.00				taxes	$ 20.00	$ 20.00
22	insurance	$ 40.00	40				insurance	$ 40.00	40
23	maintenance/mgmt	$ 165.00	$ 180.00				maintenan	$ 165.00	$ 180.00
24	utilities								
25									
26	net profit/loss	$ (220.52)	$ (185.52)				net profit	$ 325.00	$ 360.00

With these templates in place, you can do very complex analyses that apply to YOUR specific business, simply by re-entering appropriate numbers for each deal you're considering. You can compare any number of scenarios—changing the income, the interest rate, the purchase price etc. one variable at a time—and have them laid out side by side for comparison. You can save your data and email it to partners, sellers, lenders—whomever you please.

So even though using Excel to do your calculations effectively tethers you to a laptop or tablet when making calculations, it's for this reason (and because if you choose to use a financial calculator, it will come with a user's manual that tells you exactly how to get the same results using that particular calculator, and they're all different, and I can't possibly give you instruction about how to use PowerOne AND the BA35 AND the HPII for each scenario), this section will focus on the use of Excel.

How All Financial Calculation Tools Work

Whether you choose to use Excel or something else, the basic scenario for making the kinds of financial calculations we do is the same: there are 5 key variables, and you ALWAYs need to enter 4 of them to get the 5th.

The key variables are:

Present Value (called PV in Excel)
Future Value (called FV in Excel)
Payment per period (called PMT in Excel)
Interest per period (Called RATE in Excel)
Term of the loan, in periods (called NPER in Excel)

There's a 6th variable in Excel that must be entered, which is "type" this is always a 1 or a 0, with 1 referring to loans in which the interest on the balance is paid at the BEGINNING of the payment period, and 0 referring to loans on which the interest is paid at the END of the period. Since most mortgage payments include interest calculated on the balance at the end of the prior month, you'll almost always use 0.

Using Excel means using formulae build into the program to calculate the desired result. To get the answer, you enter the appropriate formula into a single cell, entering the variables in the order:

Monthly Interest rate, number of payments, payment amount, present value, future value, 0

Of course, you never enter all 6 values; you enter 5 of them to find the 6th. You tell Excel which you're trying to find by starting the formula with the equal sign and the abbreviation for the term you're calculating.

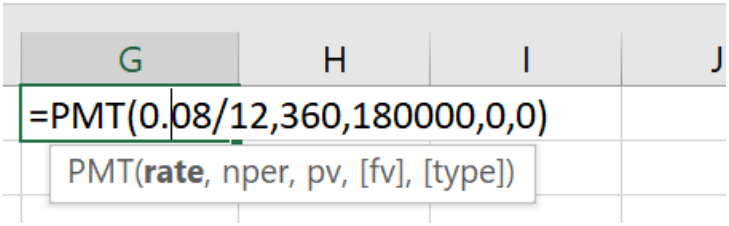
So if you're trying to find the payment on a 30 year loan at 8% interest with a starting balance of $180,000 that fully amortizes (and therefore has a future value of 0), the formula is entered into the cell like this:

=PMT(0.08/12[4],360,180000,0,0)

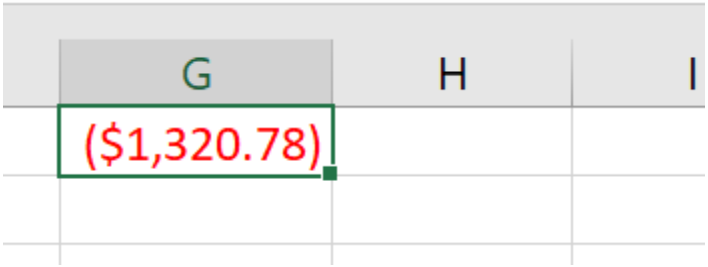
When you set up templates for various calculations, you'll enter the factors into their own cells, then reference the cells in the formula rather than typing in the numbers; in this way you can change one variable in a formula without re-typing the entire formula. This is what the 2 variations look like when you hover your cursor over the cell with the formula in it on an actual spreadsheet:

[4] Remember, mortgage loan interest rates are usually STATED yearly, but CALCULATED monthly. Therefore, unless the particular loan you're analyzing has some other term—for instance, it's a loan paid semi-weekly, with 26 payments a year instead of 12—you'll divide the interest rate by 12.

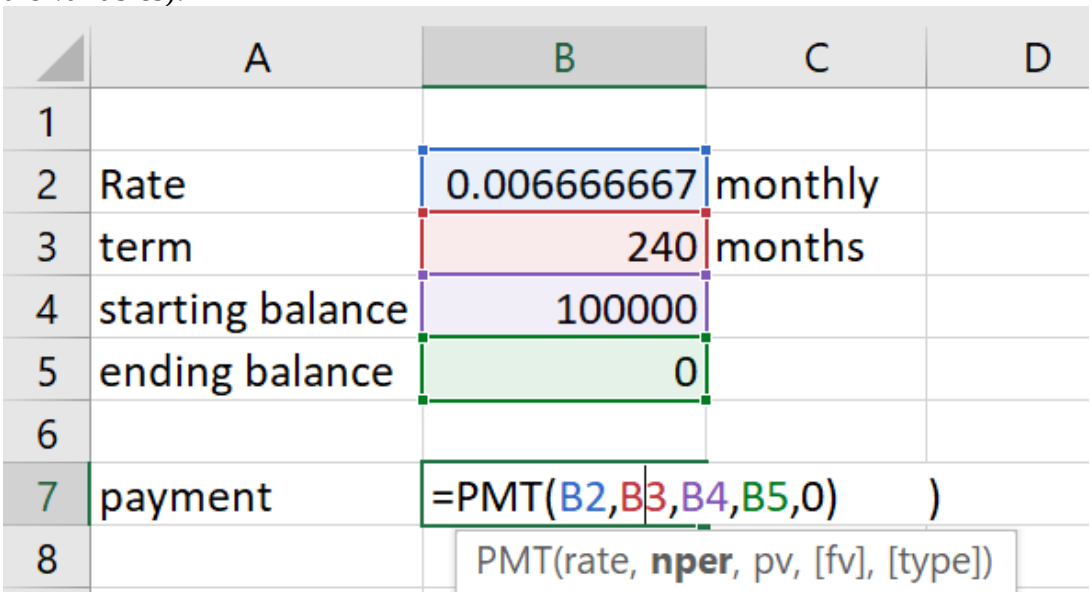
Example 1: When you enter the variables directly into the formula, the cell looks like this when you hover your cursor over it:



And like this when you don't (it just contains the answer, you can't see the variables anymore):



Example 2: When you enter the variables into a template that you make in order to be able to change one variable without changing the formula, the formula looks like this when you hover your cursor over it (the colored number b2, b3 etc. mean that Excel is looking in those cells for the variables):



And it looks like this when you remove your cursor (you only see the answer, not the

formula):

	A	B	C
1			
2	Rate	0.006666667	monthly
3	term	240	months
4	starting balance	100000	
5	ending balance	0	
6			
7	payment	($836.44)	(calculated)

All of the formulae are explained in the Excel help section, and if you happen to forget the order of the variables you can use the Insert Function dialogue box in Excel, which will prompt you for each by name.

Let's look at how these functions are used in day-to-day Transactioneering calculations:

Present Value

The "PV" function is used to input or calculate the **present value** of a loan or note—in other words, what the "loan balance" is at the starting point of the problem at hand.

The term present value is a bit confusing, because it implies that it calculates the value NOW, or requires you to enter the value NOW. In fact, what you're calculating if you're trying to figure out what the remaining balance on a loan is today, when that loan was originated a decade ago, is the future value, and the number you'd enter into present value is the original loan balance, and the real question isn't "What is this loan balance today", it's "What is the balance on a loan of amount x (present value) at interest rate y (interest rate) with payment z (payment) after n months (the number of payments made so far).

On the other hand, when you're trying to calculate the discount on the current loan balance that would be necessary to raise the yield from 8% to 12%, as in the example above, that IS a present value calculation.

Don't worry, with practice, you'll get it.

The formula to find a present value of a mortgage in Excel is =PV(rate/12,nper,pmt,fv,0)

Future value

The "FV" function is where you input the **future value** of a note, loan, annuity, etc if you know it, or calculate it if you don't.

The future value is simply the balance that will be owed after some number of payment periods have passed. In our world we mostly use Future Value to calculate the amount presently owed on a note that was originated in the past, but which still has a balance due, or the amount that will be owed on a balloon payment.

The formula to find a future value of a loan in Excel is =FV(rate/12,nper,pmt,pv,0)

Number of Payments

NPer calculates the number of payments required to pay off a loan with a certain starting balance, ending balance, payments, and interest rate.

You'll rarely use this function that way, though; more often, you'll use it within a formula that's calculating something else. When calculating a **balloon payment** (FV) or the current balance on a mortgage or land contract, "NPer" is the total number of payments prior to the balloon, or up until the date when you want to know the current mortgage balance. A mortgage with a 5 year balloon would have an NPer of 60 (5 years x 12 payments per year). A mortgage that was originated 47 months ago, for which you want to know what the balance is now, would have an Nper of 47.

The formula to find a number of periods needed to pay off a loan of a certain balance with certain payments and a certain term is =NPer(rate/12,pmt,pv,fv,0)

The Payment function

The "PMT", or **payment** function allows you to enter, or calculate, the payments on a loan or installment sale.

When you CALCULATE a payment on a mortgage in Excl, the result almost always appears as a negative number. This is a correct result, when you think about the money that's coming and

going: when you GET a loan, you RECEIVE the loan balance (PV), and then you PAY the payments—they're outgoing payments. Conversely, when you MAKE a loan, your PV should really be entered as a negative number—it's outgoing money—and when you do, the payment will appear as a positive number, because you're GETTING it, not paying it.

For this reason, when you enter a payment into the formula (when you're calculating FV, for instance), it should be entered as a negative number. If you forget, it has little effect on the result: the resulting FV will be correct, but it will be a negative number.

Where entering an outgoing payment as a negative number really DOES matter is when calculating an interest rate; using a positive number for the payment will return an error message, because when you RECEIVE $180,000 and also GET $1,312 a month in payments, the interest rate can't be calculated because it exceeds infinity.

For that reason, it's a good habit to get into to enter the payment as a negative number in your Excel formulae.

The formula to find the payments on a loan with certain terms is =PMT(rate/12, Nper, pv,fv,0)

The Rate Function

The rate function is the **PERIODIC interest rate** on a loan or investment.

There are 2 important things embedded in this seemingly simple statement:

1. If you remember your elementary school math, you'll remember that interest rates are really <u>decimals</u>, right? So when you want to know what 8% simple interest is on a $50,000 balance, you multiply 50,000 by .08, not by 8. Similarly, when you enter interest rates into an Excel spreadsheet, you must remember to do it as a decimal; .08 for 8%, .12 for 12%, .3 for 30%, and so on.

2. Because it's a PERIODIC interest rate, in a typical loan wherein interest compounds monthly, the annual interest rate must be divided by 12 in order to convert it to a monthly interest rate (because there are 12 months in a year) before entering it as the rate. So a yearly interest rate of 8% would translate to a periodic interest rate of .08/12, or .006667%

There's a quirk to Excel's calculation of the interest rate which is that it uses an iterative process to figure out the rate: it guesses at the probable rate, checks the result, if it finds that it's

wrong, it tries again, and so on.

For this reason, it asks for a 7th variable that it calls [guess]. You enter your GUESS as to what the interest rate might turn out to be to help Excel narrow the possible results. It's easiest to enter 1 (which would represent a 12% annual rate) as your guess; if you get an error message (#NUM), raise or lower your guess.

If you continue to get the #NUM error message, the probable problem is that there is no answer to the question you're asking.

For instance, entering a PV of $180,000, an FV of $0, a term of 190 months and a payment of $363/mo. cannot generate an interest rate. Why? Because there is no scenario under which a payment of $363/mo. can amortize a $180,0000 loan in 190 months. The TOTAL payments over that time would only be $68,970—not even enough to make a big dent in the PRINCIPAL balance, much less pay any interest.

The formula to find the interest rate is =RATE(Nper,-pmt, pv,fv,0,1)

Note that the result you get will be the PERIODIC interest rate; assuming the interest is calculated monthly, you'll need to multiply the result by 12 to get the annual interest rate.

Some Easy Examples to Start You Off With…

Much of the time, your use of these formulae will be pretty straightforward. You'll know 4 of the 5 variables, and you'll know exactly what you're looking for. We'll start with some examples like that. Don't worry, they get harder.

Figuring the payment on a mortgage.

One of the most problems you'll tackle as a Transactioneer is to figure out what your monthly payment will be if you agree to a note at a certain rate and terms. This is a straightforward "PMT" problem.

Q: You've found a seller willing to finance a property for you; however, he wants 8% interest, with a 20 year amortization and a 5 year balloon. The installment sale is for $100,000. What will your monthly payment be?

A: Input as follows:

=PMT(.08/12,240,100000,0,0)

The result should be $836.44 per month. Without knowing anything about the formulae involved, you've just found the monthly payment on a $100,000 20 year mortgage at 8% interest.

By the way, if you got an answer close to the above but off by a few cents using a different instrument, like a financial calculator, don't panic. It's a difference in how your calculator rounds off numbers (.67 vs .666667 in the interest rate, for instance), and won't make a major difference in your deal.

Figuring the future value (or balloon payment) on a loan

You'll most often use the FV function to calculate the balloon payment on a loan, though you might also use it to figure out how much the current balance on a continuing loan is. We'll start with the former, continuing the example above.

Q: How would much will the balance on your 8%, $100,000 loan with a 20 year amortization and 5 year balloon be when the balloon happens at 5 years?

Rate is .08/12
Nper is 60
Pmt is -$836.44
PV is $100,000
Type is 0

Enter the formula as (.08/12,60,-836.44,100000,0)

The result should be **$87,525.58**. This is the amount that will still be due when you make your final payment in 5 years.

By the way, does it surprise you that after making $50,186.40 in payments (60 months x $836.44/mo), you still owe over $87,500 on a $100,000 loan? It shouldn't—in a typical loan amortization, most of the interest is paid up front, with the later payments being mostly principal.

Computing Present Value

Present value is a calculation used a lot by note buyers, as they determine what to pay for an existing note. The question of "What is a particular payment stream worth today, if I'm looking for a particular return?" is best answered by a present value calculation.

How does that affect YOU?

Well, those same note buyers will pursue your sellers, once they find out that they've carried back a mortgage on a house you bought. Your sellers will get dozens of pieces of mail over the years offering to buy "your" mortgage and note for cash.

And unless you've agreed to a crazy-high interest rate AND put a bunch of money down AND given the seller a full application package with your credit report and income verification and all that, these note buyers are going to want to buy the payment stream represented by the mortgage and note at a fairly deep 'discount', meaning that their offer to turn your seller's income stream into cash will be lower than face value.

Chances are, if it's a longish-term mortgage, your seller will, at some point, have some change of life circumstances or heart that tempts him to take one of these cash offers for his mortgage and note.

If someone gets to give the seller a discounted amount for your debt, wouldn't you like that someone to be YOU?

That's why we always put "first rights of refusal" into our seller-held loans; so that if the seller gets an offer that he'd like to take to turn the debt into cash, you get the first shot at matching that offer and paying off the loan at a discount. So let's look at a scenario like that:

You've bought a property with seller financing at 0% interest. The original loan balance was $100,000 with a 15 year term and payments of $555.56/month.

It's now exactly 5 years to the day later, and the seller has an offer from a note buyer to buy that loan; however, the note buyer doesn't want to buy it at 0% interest, of course. He wants 9% interest. So what is your loan worth to such a note buyer?

The way to think of this problem is to ask, "What is the present value of a stream of 120 payments (the original 180 – 60 already made) if the payment is $555.56 a month and the interest rate is 9%?"

And you'd input it as =PV(.09/12,120,-555.56,0,0)

The answer should be $43,856.85.

And what do you owe at this point? That doesn't take a financial calculator to answer: it's the original balance of $100,000, less 60 payments of $555.56, (which total $33,333.60).

You OWE $66,666.40. You can pay off the loan for $43,856.85. Should you?[5]

Computing the Interest Rate on a Loan

In order to compute the interest rate, you must know the initial balance of the loan, the term, the P&I payment, and whether the loan is fully amortized (that is, whether the number of payments specified will pay off the loan).

Q: A seller is uncertain of his interest rate. He knows his original mortgage balance was $55,000; that he has a fixed rate loan; that the term is 30 years; and that his payment is $485.19 per month PITI. His real estate taxes are $600 per half year, and his insurance premium is $120 per year. What is his interest rate?

A: This is a question that requires some simple math as well as the actual financial calculations. It's always important to know whether the payment you're being quoted is interest only, principal and interest, principal interest and taxes, principal interest taxes and insurance, or something else.

So the first question is, what's the actual principal and interest payment?

That's an easy one: it's
$485.19 PITI
-$100 taxes
-$10 insurance
$375.19

NOW enter the loan terms:

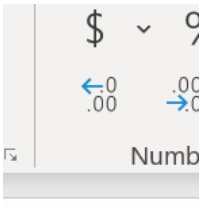
Nper= 360 (30 years x 12 payments per year)
PMT = $375.19 ($550 PITI - $100/mo taxes - $10/mo insurance. Remember, the taxes and insurance payments do NOT help pay off the loan!)
PV = $55,000
FV = $0 (the loan will be completely paid off at the end of the term)

Remember that in an interest rate calculation on Excel, you also have to enter a guess about the rate, in addition to the type of loan, so the formula would look like this:

[5] If you answered, "Yes, because the loan balance is a bad luck number!" You may be in the wrong business. If you answered "No, because I'm effectively just getting a 9% return on the $43,856 cash I'd have to use to pay off the loan, and I can get better returns on that cash by loaning it to other people", you'll do very well in real estate. If you answered, "Yes, because I can borrow that $43,856 from a private lender for 6% interest, which effectively gives me a 3% return on THEIR money," you may already be a Transactioneer.

=RATE(360,-375.19,55000,0,0,.1)

You should get the result .064 (note: if you got 1, it's because you don't have the cell in Excel set to show enough digits. You fix this by expanding the number of decimal places shown with this button at the top of the home menu



And also remember that this is the PERIODIC (in this case, monthly, like the payments) rate. When you multiply it by 12 months, you get the annual rate of 7.25%.

How to Calculate the Number of Payments

When discussing creative finance options with sellers, you sometime come to an agreement through the back door. When you really learn to listen to what a seller wants, you may find that total price and monthly payments are the most important thing to him, NOT how long those payments will go on. You'll also use this function to analyze how making a higher payment affects the term of a loan.

Q: A seller has agreed to accept $45,000 with $4,000 down, 10% interest, and payments of $400 per month. How long will it take you to pay off this loan?

A: A question that starts "How Long" is always a matter of solving for "NPer". So, again, start with what you already know.

Rate= .833 (10%/12)
PMT = $400
PV = $41,000 ($45,000 total sale price - $4,000 down payment)
FV = $0
Type = 0

So the formula is =NPer(.833,-400,41000,0,0)

And the answer is 232 months. Since N is the number of payment periods, you must divide

by 12 to get the number of years. The loan will be paid off in 19.33 years. That's 19 years 4 months to all you non-engineers.

Q: How long would it take to pay off the same loan at $500 per month?

All you have to do is change the payment in the formula above from $400 to $500—and this is where setting up a template, instead of entering the entire formula in one cell, comes in handy. You can look at the results side by side, like this:

	A	B	C	D	E	F
1		**term at $400/mo**			**Term at $500/mo**	
2	Rate	0.008333333	monthly		0.008333	monthly
3	Payment	-400	per month		-500	per month
4	starting balance	41000			41000	
5	ending balance	0			0	
6						
7	Term	232.00	(calculated)		138.56	(calculated)

Again the answers in cell B7 and E7 are calculated by reference to the other cells, simply by starting to type the formula =Nper(, and then clicking on the cells with the appropriate variables, separated by commas. Watch the video lesson to see exactly what this looks like, if you're not familiar with Excel.

For extra credit, how much will you save in total interest payments by paying $500 a month instead of $400 a month?

You don't need a complicated formula for this one: since the starting value is the same in both examples, that means that any difference between the total of the payments between the 2 scenarios is a difference in interest payments.

Since 232 payments at $400=$92,800 and 138.6 payments at $500=$69,300, you save $23,500 in interest payments—more than half the original purchase price of the property—by paying the higher payment for the shorter time.

Real Estate Algebra

Now that you've learned the basics of the Excel financial functions, let's jump into some of the types of situations you might actually run across in real life.

Many times, calculations require numbers other than those that relate to the financing of the deal. For instance, it's important in the real world that you understand things like:

- Income and expense expectations for various types of deals
- Expectations of various types of 3rd party investors in terms of return on investment
- The legal, practical, and tax consequences of different financing strategies
- How to explain the benefits of various financing arrangements to sellers and private investors

And many times, the question to be answered isn't as simple as "What is the payment on this mortgage," but is rather more along the lines of, "What is the right way to do this deal for me, for the seller, and for the property?"

So let's look at some examples of this thinking, and do the math to come up with the right answers.

Problem 1: A seller tells you that he "knows" his 3-family is worth $85,000 and that he won't take a dime less. The income and expense numbers tell you that the building <u>nets</u> about $10,800 per year after all expenses except debt service, and you want to make a $300 per month profit. <u>How can you make a full price offer and still make this profit?</u>

A: The first question is, how much of a monthly payment (PMT) can you afford to make? The answer is:

$10,800 annual net income/12 = $900/month net before mortgage payment
$900 net income - $300 desired profit = $600 available for mortgage payback–a $600 payment

Now work the problem with your new payment of $600/month.

Your initial offer will almost certainly be to pay the $85,000 at $600/mo until paid, which doesn't actually require a financial calculator. It just requires that you divide $85,000 by $600, which gives you a term of 141.67 months, or 11 years 9 months with a remainder payment in the 10th month of year 12.

You make your offer, and the seller comes back with this statement: "I talked to my CPA, and he said that I need to get at least 7.5% interest on a loan like this". Assuming you want to make the same payment and pay the same price, what changes, and how?

Q: Your goal is to own all of your properties free and clear in under 10 years, and you don't care about cash flow in the meantime. Therefore, you offer the seller $850/mo for 100 months. He comes back with the "My CPA says I need 7.5% interest" thing again. Can you do this without having NEGATIVE cash flow?

Q: So how would the seller's purchase price have to change for him to get 7.5% for 100 months at $850/mo?

Q: How would you say that to the seller?

Problem 2

From time to time, you will run across people who have notes, judgments, liens, or other payment streams or promises of future payment that they want to turn into cash. And while you might not consider yourself a "note buyer" or a "debt buyer," these are often opportunities to get a PROPERTY via a "back door"—if these debts are secured by real estate, and especially if they're in default, you might well end up with the real estate in exchange for releasing the debt, or through a foreclosure process.

When owners of DEBT sell that debt for cash, the payments or promise of payment are almost always sold "at a discount," meaning that the amount you pay to get the payment stream (or promised payment stream) is less than the current face value—that is, the amount owed by the borrower—of the debt.

The discount isn't a discount they way we think of it in real estate, where it would be based on some percentage of the amount of the debt. Instead, the "discount" is generated by deciding the rate of return on the investment you'd like to get, applying that rate to the payment stream, and figuring out the present value of that payment stream based on the desired rate of return.

For instance, if you bought a mortgage that had a face interest rate (the rate the borrower was actually paying) of 5%, but you wanted a 10% return, the amount you could pay the seller would be LESS than the balance owed, because your purchase of that mortgage doesn't change the TERMS of the mortgage from the borrower's perspective. He'll continue to pay payment $x at interest rate y% on balance z. The way you get your 10% return is by paying less for the payment stream than balance z.

One really common scenario you'll run across as a Transactioneer is a seller who has already sold his property on a land contract/contract for deed, but now wants to sell the property to you, because he doesn't want payments anymore—he wants cash.

Many of these sellers don't seem to understand that they can't sell the property for "what it's worth"—that is, the market value—because they've really already sold it to the person who's living in it, and even though the title is still in the seller's name (that's how land contracts work, more on that in the "Control without Title" section), any sale of the property is subject to the land contract.[6]

In other words, the seller has already agreed to sell the property, and are in fact in the process of selling the property, at a certain price and terms, and the fact that, on the open market, the property might be worth more than what the land contract buyer owes is irrelevant. Any buyer of that property buys it subject to the pre-existing agreement between the seller and the land contract buyer. If that's you, you'd obviously be crazy to pay $143,000 for a property that the land contract buyer only owes $76,000 to pay off, even if the property value is, say, $200,000[7].

Instead, the way you decide whether you want to buy a property already subject to a land contract is to decide what rate of return would make you happy, then offer an amount for the property that creates that rate of return, based on the land contract buyer's terms.

A seller has approached you about buying her property. Exactly 2 years ago, she sold it on land contract under the following terms:

[6] This can be a little confusing because normally when we talk about buying "subject to", we're talking about assuming someone else's debt. In buying a property subject to a land contract, what we're doing is buying a property that we know is already subject to a pre-existing agreement that we must continue to honor. In other words, we're not taking over the position of the DEBTOR, the way we do when we buy a property subject to a mortgage. Instead, we're taking over the position of the CREDITOR, the way a bank does when it buys a mortgage from another bank.

[7] You could, of course, hope that the land contract buyer defaults, thus getting you the property itself through some mechanism—but you should never assume that the buyer will do so. In fact, he might do the opposite, and pay you off early!

Sale price: $67,900
Down payment: $5,500
Interest rate: 10%
Term: 20 years
Payment: $521.94.
Other terms: <u>Seller</u> pays $100/mo. for taxes and insurance

Now the seller wants to sell the property, subject to that land contract, for cash. The seller would like to get $50,000 for the property.

Q: If you pay this, what will your effective rate of interest be?

Q: Should you buy this property?

Q: At what price should you buy it if you want to achieve a 16% rate of return?

Q: Should you buy this property if the actual value of the property is $25,000?

Problem 3:

Q: You're in contract to purchase a junker property for $7,000. You have an offer to buy it for cash at $12,000. You have another offer to buy it for $22,000 if you'll carry a note with $4,000 down, 10% interest, a 20 year term, and payments of $179.97/mo.

Q: You don't have the money to pay the seller unless you get cash for the property—but you do know a note buyer who will buy an unseasoned note for 18% interest. Assuming the note buyer will buy the note "at the table", which offer should you take?

Q: If you only wanted the sell the note buyer enough payments to equal the $7,000 you need to buy the property, how many payments would that be?

Q: If the borrower cashed you out the day the payments reverted back to you, how much would you have made on the deal, total?

Q: If the borrower never cashes you out, but pays for the entire 20 years, what will you have made by selling the first $7000 of the payment stream?

Q: If you decide to sell the remaining payment stream when it reverts to you, at 18% interest, how much cash will you get?

Q: Do you think it's realistic that note buyers want the same return on the 1st 60 payments of a note as on the 2nd 60, or the last 60? Why or why not?

Problem 4:

Q: You are interested in a 5-family. According to public record, the owner purchased the property 5 years and 3 months ago for $150,000. He paid 20% down and got a 10% fixed-rate loan amortized over 30 years. His payments are $1,053 per month. How much does he owe now?

Q: If the gross rents from this property are $2,500 a month, should you buy it subject to his existing loan?

Problem 5:

Q: A seller has offered to carry back a mortgage of $40,000 at 12% interest, amortized over 25 years with a 7 year balloon. How much will you owe at the end of 7 years if your payment is $421.29 per month?

Q: Using the same example, how much would the balloon payment be if the seller agreed to defer all payments until the balloon came due?

Problem 6:

2 years ago, when you were a broke newbie, you bought a property for $60,000 with no money down and payments of $600/mo for 100 months. You were smart enough to put a first right of refusal to buy the note in the documentation. The seller has an offer on the table from a note buyer to buy the rest of your payments for $18,000. You happen to have $18,000 cash sitting around.

Q: If you buy out your own payments for $18,000, what is the effective yield on your investment?

Q: Should you do this?

Problem 7:

You are looking at 3 bedroom home that will rent for $750 per month. The seller is firm at $65,000, but offers to carry a mortgage on his property under the following terms: you put down 5% as a down payment. He will carry the balance at 12% interest amortized over 30 years with a balloon in 10 years**.**

Q: Should you take him up on it?

Q: What if he offered the same terms with no money down? What if he offered it without the balloon?

Q: Is there any way to structure this deal so that you can give him his price and still make money?

Q: Is there any way to structure this note so that he gets his price AND his interest and you still make money?

Problem 8

Remember the problem that launched this entire exercise? No? Let me help:

The seller's underlying mortgage had a balance of $13,000 with payments of $352 per month and 12 years remaining. My competitor had negotiated a purchase price of $35,000 with payments of $352 per month and a 30 year amortization. The seller agreed and was ready to close ASAP, but the buyer couldn't do the deal because he couldn't figure out what the interest rate was on the land contract.

Q: Can you?

