

## 8.3 - Mortgage Application Process

---

Example 1, p. 402

① Calculate the monthly payment

② Monthly payment  $\times$  total # payments  
= total paid for the mortgage

③ Total paid for the mortgage - mortgage  
= interest on mortgage.

$$Pmt = \frac{A(i)}{[1 - (1+i)^{-n}]}$$

$$\frac{190,000 \left( \frac{.064}{12} \right)}{[1 - (1 + \frac{.064}{12})^{-360}]}$$

1188.46 monthly

X 360

---

427,845.60

Total paid  
on mortgage

-190,000.00  

---

237,845.60

mortgage  
interest

Ex 3 p. 404 / Convert everything  
to monthly \$

Monthly mortgage = 1233.56

Semi-annual tax bill = 867.67  
6 months so (5206 ÷ 6)

Annual homeowner's insurance = 90.00  
12 months so  $\frac{1080}{12}$  (2191.23)

## Ex 4 Front end ratio

\* Deals only with housing expenses. (mortgage + property taxes + homeowner's insurance)

Monthly mortgage	1233.00
Monthly property tax (9400 ÷ 12)	783.33
monthly homeowner's insurance (876 ÷ 12)	<u>73.00</u>
Monthly housing	2089.33

Front end Ratio

Monthly Housing  
Monthly gross income

$$\frac{2089.33}{(135,511 \div 12)} = .185 = \textcircled{18.5\%}$$

Below 28% so the bank will lend  
the money.

Back end ratio (Debt to income ratio)

$$\frac{\text{Monthly debt payments}}{\text{Monthly gross income}} = \%$$

\* Monthly debt includes all housing expenses plus car loans, average credit card balance and any other monthly loans.

Back end ratio  $< 36\%$

p. 406  
Do example 5

$$\text{Gross Income (Annual)} = 166988$$

$$\div 12$$

$$\text{monthly income} = \underline{13916}$$

$$\text{Mortgage monthly} = 1544$$

$$\text{taxes monthly} = 824$$

$$\text{insurance monthly} = 84$$

$$\text{total housing expenses} \quad \underline{2452} \quad \text{Front end}$$

$$\text{add other debt} \quad \underline{5610}$$

$$(\text{510} + \text{5100}) \quad \text{\$ } 8062 \quad \text{total back end expenses}$$



$$\text{Back end ratio} = \frac{\text{total monthly debt}}{\text{gross monthly income}}$$

$$\frac{8062}{13916} = .579 = \textcircled{57.9\%}$$

A house is worth \$250,000 and has an assessed value of \$183,000. The property tax rate is 2.3% of assessed value.  
What are the property taxes?

$$\begin{array}{r} 183000 \\ \times .023 \\ \hline \end{array}$$

4,209 annual property  
taxes