

Down payment: 18% of 426500 = 76770

Purchase Price - down payment Page 32

$$PV = 426500 - 76770 = 349730$$

Example 3

The Kirk family purchased a home valued at \$426 500 and made an 18% down payment. They borrowed the rest from a credit union with a 20 year mortgage at an interest rate of 3.28% compounded semi-annually.

a) Calculate the Kirk family's bi-weekly payment PY 26

b) Calculate the amount paid towards the principal in the first 6 years. Biweekly

a) $N = 20 \times 26 = 520$

$$I = 3.28$$

$$PV = 349730$$

$$*PMT = \frac{-915.50}{\rightarrow} \$915.50$$

$$FV = 0$$

$$PY = 26$$

$$CY = 2$$

b) Amount paid (6 years \times 26 = 156)

$$Prn (1,156)$$

$$= \$82224.97$$

Example 4

The Suarez family purchased a home that was valued at \$260 000. They paid a \$30 000 down payment, and took out the remainder as a mortgage at 4.3% interest compounded semi-annually for 20 years. $N = 20 \times 12$

$$I = 4.3$$

$$CY = 2$$

a) Calculate the monthly payment on this mortgage. PY = 12

b) Calculate the amount of interest they will have paid after 10 years.

c) The value of their home has increased by 2.2% annually for the last 10 years. Calculate the total equity the Suarez family has in their home after they have lived there for 10 years.

a) $N = 20 \times 12 = 120$

$$I = 4.3$$

$$PV = 230000$$

$$*PMT = \frac{-1425.71}{\rightarrow} \$1,425.71$$

$$FV = 0$$

$$PY = 12$$

$$CY = 2$$

b) $\sum Int(1,120) = \$86185.62$

c) Find the Future value after 10 years when $PV = 260000$, $I = 2.2\%$

$$N = 10$$

$$I = 2.2$$

$$PV = -260000$$

$$PMT = 0$$

$$*FV = \frac{323,208.15}{\rightarrow}$$

$$PY = 1$$

$$CY = 1$$

$$\text{Balance} = \text{bal}(120) = 139160$$

$$\begin{aligned} \text{Equity} &= \text{Value of house} - \text{Amount owing} \\ &= 323208.15 - 139000 \\ &= \$184107.62 \end{aligned}$$