

Section 7.5 Installment Buying Pg 15

A purchase that requires regular periodic payments is installment buying.

These payments are called installments.

A fixed installment loan is a loan that is repaid in equal periodic payments.

A down payment is the amount paid at the time of purchase. This down payment is not included in the payment amounts.

Formula: $\left(\begin{array}{c} \text{percent} \\ \text{as a decimal} \end{array} \right) \left(\begin{array}{c} \text{price} \end{array} \right)$

The amount financed is the amount you pay interest on. This is the amount your payments are calculated from.

Formula: $\text{price} - \text{down pmt}$

(total cost)

2/5

The total installment price is the sum of all the payments plus the down payment. This amount is the total you pay including interest.

Formula: $(\text{pmt amt})(\# \text{ pmts}) + \text{down pr.}$

The finance charge is the amount of interest paid during the repayment of a loan.

Formula: $\frac{\text{total installment price}}{\text{price}} - \text{purchase price}$

There are 6 HW problems.

Let's work through some.

HW #3 is posted in D2L as an announcement.

ex1 Hw #1

Purchased for \$590

Down Pmt 14%

Financed Rest for 6 mo

Payments \$89.90

Find the down payment and total installment price.

$$\text{Down Payment} = (\% \text{ as a dec}) (\text{purchase price})$$

$$14\% = 14 \div 100 = 0.14$$

$$\text{Down Pmt} = (0.14)(590) = \$82.60$$

Total Installment Price

$$(\text{pmt amt})(\# \text{ pmts}) + \text{down pmt}$$
$$(89.90)(6) + 82.60$$

$$= \$622$$

4/5

ex 2 HW #2 (similar to HW #6)

Purchased for \$15,700

Down Pmt \$5,200

24 monthly payments of \$489.30

Find the APR

* Use TVM Solver. Don't use APR table. *

N = 24

I% = solve (alpha enter)

10.98%

2 dec places

→ PV = 15,700 - 5,200 = 10,500

PMT = -489.30

FV = 0 (zero bc paying off loan)

P/Y = 12

C/Y = 12 (monthly)

amt financed = price - down pmt

5/5

ex 3 Hw #5

Purchase Price \$890

Down Pmt \$92

12 monthly pmts of \$114.75

Find total installment price

$$\begin{aligned}
 & (\text{pmt amt})(\# \text{ pmts}) + \text{down pmt} \\
 & (\$114.75)(12) + \$92 \\
 & = \boxed{\$1,469}
 \end{aligned}$$

ex 4 Hw #4

Purchase Price \$525

Down Pmt \$75

30 monthly pmts

Finance charge 11% (interest rate)

Find Pmt amt

TVM
Solver

N = 30

payments

I% = 11

PV = 525 - 75

amt financed

PMT = solve $\boxed{\$17.23}$

FV = 0

paying off loan

P/Y = 12

C/Y = 12

"monthly"