

## Review Section 11.4

1. Paige borrowed \$5,000 from her local bank to buy a car. To repay the loan, she was scheduled to make 36 monthly installment payments of \$155. Instead of making her 24<sup>th</sup> payment, she decides to pay off the loan with her graduation money.

a) Determine the APR of the installment loan.

$$DPR = \frac{FC}{AF} \times 100 = \frac{580}{5000} \times 100 = 11.60$$

$FC = 155 \times 36 = 5580$   
 $\quad \quad \quad - 5000 \text{ AF}$   
 $\quad \quad \quad \hline 580 \text{ FC}$

Table ↑ 7.5%

b) How much interest will Paige save by paying off the loan early?  $n = 36 - 24 = 12$   $V = 4.11$

$$U = \frac{12(155)(4.11)}{104.11} = 73.43$$

c) What is the total amount due to pay off the loan?

$$(12+1)(155) = 2015$$

$$\quad \quad \quad - 73.43$$

$$\quad \quad \quad \hline 1941.57$$

2. Amanda purchased a 2009 Honda Civic for \$15,000. She made a 10% down payment and financed the balance with a 60-month installment loan with an APR of 6.5%.

a) Determine the amount of Amanda's down payment.

$$15,000(.10) = 1500$$

b) Determine the amount that Amanda borrowed from the bank.  $15000 - 1500 = 13500$

- c) Determine the total finance charge.

$$FC \quad \frac{13500}{100} \times 17.40 = 2349$$

- d) Determine Amanda's monthly payment.

$$\frac{13500 + 2349}{60} = 264.15$$

3. Scott's credit card statement shows a balance due of **\$450.00 on June 1**, the billing date. His bank charges an interest rate of 1.25% per month. For the period ending on July 1, he had the following transactions.

June 3	Charge: Movies	\$21.00
June 10	Charge Clothes	\$88.00
June 14	Payment	\$250.00
June 26	Charge: Restaurant	\$65.00

- a) Determine the finance charge on July 1 using the unpaid balance method.

$$\$ 5.63$$

- b) Determine the new account balance on July 1.

$$450 + 5.63 + 21 + 88 - 250 + 65 = 379.63$$

4. Refer to Scott in Example 3. Determine the average daily balance from June 1 to July 1. Show the entire chart!

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		Days	
6/1	450	2	900
6/3	471	7	3297
6/10	559	4	2236
6/14	309	12	3708
6/26	374	5	1870
<hr/>			
7/1		30	12011

ADB  $\frac{12011}{30} = 400.37$

- a) Determine the finance charge on July 1 using the average daily balance.

$400.37 \times (.0125) \times (1) = 5$

- b) Determine the new account balance on July 1.

$374 + 5 = 379$

5. Jackie's credit card company determines the minimum monthly payment by adding any interest to 2% of the outstanding principal. The interest rate is 0.04238% per day. On September 15, Jackie uses her credit card to purchase a new computer for \$1,500. She does not use her credit card to make any other purchases in September.

- a) Assuming Jackie had no interest leading up to her billing date, determine her minimum payment due on October 1.

$$(.02)(1500) = 30$$

- b) On October 1, Jackie only pays \$300 instead of the full balance. Assuming that there are no additional charges in October, determine her new minimum payment due on November 1.

$$1500 - 300 = 1200$$

$$I = 1200(.0001238)(31)$$

$$\text{Mini: } (.02)(1200)$$

$$\begin{array}{r} I = 15.76 \\ \text{mini} = 24 \\ \hline \$ 39.76 \end{array}$$

40