Chapter 5 Consumer Credit

5.1 MONTHLY PAYMENTS: HOW MUCH CAN YOU AFFORD TO BORROW?

- Instead Taylor decides to buy a new car (Scion Tc) In this case she will need to borrow $14,350.

- What is her monthly payment is she borrows $14,350 for a 3-year period at a interest rate of 9%?
  - $456.33

- How much will she pay for the car in the course of 3 years?
- = ANS * 36
- = $16,427.74.
  - She will pay $16,427.74, which is the deferred payment price or the total payment.

Skill 3

- Lets solve the monthly payment formula for P, the amount of the loan.

- **Amount Formula**

$$P = \frac{M[(1+r)^n - 1]}{r(1+r)^n}$$

▫ Where M = monthly payment

        P = amount of loan

        r = monthly interest rate

        n = number of payment periods

Skill 3

- What is the amount of money Kristin can borrow at 6% for 3 years if she can afford a monthly payment of $325?

- The total amount of money she can afford to borrow is $10,683.08.

- Taylor is also considering 4 other cars for which she can obtain 6% financing for 3 years, 4 years, or 5 years.
- What are her monthly and total payments on loans of $4100, $5250, $6450, and$8375?

- We want to use a spreadsheet for this.

Loan Amount	Number of Years	Monthly Payment	Total Payment
$4,100.00	3	$124.73	$4,490.28
$4,100.00	4	$96.29	$4,621.85
$4,100.00	5	$79.26	$4,755.87
$5,250.00	3	$159.72	$5,749.75
$5,250.00	4	$123.30	$5,918.23
$5,250.00	5	$101.50	$6,089.83
$6,450.00	3	$196.22	$7,063.97
$6,450.00	4	$151.48	$7,270.96
$6,450.00	5	$124.70	$7,481.79
$8,375.00	3	$254.78	$9,172.21
$8,375.00	4	$196.69	$9,440.98
$8,375.00	5	$161.91	$9,714.73

Skill 2

- When Kristin Stewart goes away to college she knows she will have to borrow money even though she is getting some scholarships.
- She knows that she can afford monthly payments of $325 and would like to borrow in even multiples of $1000.
- What is the largest amount that she can borrow at 6% for 3, 4, and 5 years?

- Lets use a spreadsheet to solve this problem for borrowing $10,000-$20,000 in increments of $1000.

Amount Borrowed	3 years	4 years	5 years
$10,000.00	$304.22	$234.85	$193.33
$11,000.00	$334.64	$258.34	$212.66
$12,000.00	$365.06	$281.82	$231.99
$13,000.00	$395.49	$305.31	$251.33
$14,000.00	$425.91	$328.79	$270.66
$15,000.00	$456.33	$352.28	$289.99
$16,000.00	$486.75	$375.76	$309.32
$17,000.00	$517.17	$399.25	$328.66
$18,000.00	$547.59	$422.73	$347.99
$19,000.00	$578.02	$446.22	$367.32
$20,000.00	$608.44	$469.70	$386.66

Assignment
P193 TYS 1-9
P194-195 EYS 7-20, 30-37