

# Ch. 8

## Mid Chapter Review

p. 503 #6.

washer/dryer cost \$2112.  
minus deposit \$500

she borrows \$1612

$$P = 1612$$

$$n = 1.5 \times 2 = 3$$

$$i = \frac{r}{2}$$

$$A = 2112$$

sub values into

$$A = P(1+i)^n$$

and solve

for  $i$ .

$$2112 = 1612 \left(1 + \frac{r}{2}\right)^3$$

$$\frac{2112}{1612} = \left(1 + \frac{r}{2}\right)^3$$

$$1.310173697 = \left(1 + \frac{r}{2}\right)^3$$

$$\sqrt[3]{1.310173697} = 1 + \frac{r}{2}$$

$$1.09423254 = 1 + \frac{r}{2}$$

$$2(0.09423254) = \left(\frac{r}{2}\right)$$

$$r = 0.18845 = \frac{18.85\%}{a}$$

$\therefore$  Sara was charged  $18.85\%/a$ .

ch. 8 MCR p. 503 #9

a)  $cp = \text{semi-annual}$   
 $= \text{twice a year.}$

$$A = P(1+i)^n$$

$$\left\{ \begin{array}{l} A = 9125.56 \\ P = 8715.91 \\ i = ? = \frac{r}{2} \\ n = 1 \end{array} \right.$$

Sub them  
in formula  
and isolate  $i$ .

$$9125.56 = 8715.91(1+i)^1$$

$$\frac{9125.56}{8715.91} = (1+i)^1$$

$$1.047000256 = (1+i)^1$$

$$1.047000256 = 1+i$$

$$1.047000256 - 1 = i$$

$$0.047000255 = i$$

$$4.7\% = i$$

$$i \times 2 = r$$
$$4.7\% \times 2 = \textcircled{9.4\% = r}$$

$\therefore$  she is being charged 9.4%/a.

b) use  
 $A = 8715.91$   
 $i = 0.047$   
 $n = 1$   
sub and solve  
for "P".

$$8715.91 = P(1.047)^1$$

$$P = 8715.91$$

$$\frac{8715.91}{1.047} = P$$
$$\therefore P = \underline{\underline{\$8324.65}}$$