

Jim withdraws \$20 every week from an ATM that charges a \$1.50 fee in addition to the \$1.50 that his bank charges him.

a) How much on ATM fees does Jim pay in 1 year. $\$3 \times 52 = \156

b) Suggest 2 things to reduce his fees.

MATH ON THE JOB

Carla Thibodeau grew up in northern New Brunswick, where she attended Miramichi Valley High School. After graduating, she did her Bachelor of Arts at the University of New Brunswick, studied basic accounting at New Brunswick Community College, and then pursued leadership development training through an institution in Pittsburgh, Pennsylvania.

Carla is now back in the Miramichi, where she works as the senior member services representative at the Beaubear Credit Union. She is responsible for the cash supply at the branch, servicing of the ATM, control of money orders, coaching other member services representatives, and daily customer service.

A customer wants to buy \$500.00 USD in traveller's cheques and pay for them from her chequing account. At the time of purchase, the exchange rate is \$1.0526 CAD for \$1.00 USD. There is a 1% commission on the Canadian dollar value of the traveller's cheques. Carla must also charge a \$1.00 fee for the transaction. How much money should Carla withdraw from the customer's account?



Among her other duties, Carla Thibodeau uses math to project how much money her Beaubear Credit Union branch needs from the bank.

SOLUTION

Carla will need to convert \$500.00 USD into Canadian dollars (CAD). At the time of purchase the exchange rate is \$1.0526 CAD for \$1.00 USD.

Calculate the cost of \$500.00 in USD traveller's cheques by converting \$500.00 USD to Canadian dollars.

$$\$500.00 \text{ USD} = 500 \times \$1.0526 \text{ CAD}$$

$$\$500.00 \text{ USD} = \$526.30 \text{ CAD}$$

The converted cost of \$500.00 USD is \$526.30 CAD.

Calculate the 1% commission.

$$\$526.30 \text{ CAD} \times 0.01 = \$5.26 \text{ CAD}$$

Add the commission of \$5.26 and the bank fee of \$1.00 to calculate the total cost for the traveller's cheques.

$$\$526.30 + \$5.26 + \$1.00 = \$532.56$$

Carla must withdraw \$532.56 from the customer's account to pay for the traveller's cheques.

$$500 \text{ US} \times \frac{1.0526 \text{ CAD}}{1.00 \text{ US}} = 526.30 \text{ CAD}$$

$$\begin{array}{r} 1\% \text{ of } 526.30 \\ 0.01 \times 526.30 \\ \hline \$5.26 \end{array}$$

$$\$1.00 \text{ fee} + 526.30 + 5.26 = 532.56$$

EXAMPLE #2: You borrowed \$500 from your older brother who charges 4.5% per annum. How much will you owe him after 2 years?



$$I = Prt$$

$$I = (500)(0.045)(2)$$

$$I = \$45$$

$$A = P + I$$

$$A = P + I$$

$$A = 500 + 45$$

$$A = \$545$$

EXAMPLE #3:

Betty-Ann's bank offers a simple interest rate of 4% per annum. How much interest would Betty-Ann earn on her investment of \$4000 after 8 months.

$$I = Prt$$

$$I = (4000)(0.04)\left(\frac{8}{12}\right)$$

$$I = \$106.67$$

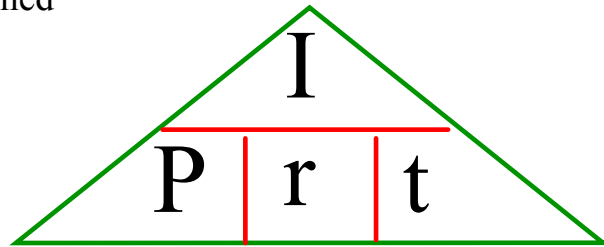


Time

$I = Prt$ $A = P + I$

↑ Interest earned ↑ Amount

must be as decimal.
must be in years



$P = \frac{I}{rt}$

} Rearranging???

$t = \frac{I}{Pr}$

Attachments

Assignment - Simple Interest.doc