# Mr. G in Grade 9 

 Episode 2:A Romantic "Interest"

## Last time on... <br> Mr. G in Grade 9



## Calgary, Alberta, Canada





There was this girl... Caroline

Picture not found.

## Caroline was VERY forgetful.

She used to forget her lunch money, and I would lend her money.

But, she would ALSO forget to pay me back. Sometimes it took weeks!

And I still needed to get my iPod Classic!
So, I made a deal with her...

I told Caroline if she borrowed money from me, I would charge her an extra \$1 for each day she didn't pay me back.

If Caroline borrowed $\$ 10$ and forgot to pay me back 3 days in a row, how much does Caroline owe me (total)?

$$
\begin{array}{r}
3 \text { days } \times \$ 1 \text { per day }=\$ 3 \text { (Interest) } \\
\$ 10 \text { (Principal) }+\$ 3 \text { (Interest) } \\
=\$ 13(\text { Final Amount })
\end{array}
$$

Principal - How much money you borrowed, invested or lent to someone (\$10 in the last example)

Interest - How much EXTRA money is owed (\$3 in the last example)

Final Amount $=$ Principal + Interest $($ Future Value $)=\$ 10+\$ 3=\$ 13$ (in the last example)


Picture not found.


When banks lend you money, interest is charged as a percentage of the Principal.
(How much money is being borrowed)

For example, a bank might charge you 5\% of the Principal for every year you borrow money.

$$
\begin{aligned}
& \boldsymbol{I}=\boldsymbol{P} \cdot \boldsymbol{r} \cdot \boldsymbol{t} \\
& \mathrm{I}=\text { Interest } \\
& \mathrm{P}=\text { Principal } \\
& \mathrm{r}=\text { Interest Rate (decimal) } \\
& \mathrm{t}=\text { Time (in years) }
\end{aligned}
$$

