## Simple Interest Worksheet

1. Erica's parents gave her $\$ 500$ for her high school graduation. She put the money into a savings account that earned 7.5\% annual interest. She left the money in the account for nine months before she withdrew it. How much interest did the account earn if interest is paid monthly?
2. If she would have left the money in the account for another nine months before withdrawing, how much interest would the account have earned?
3. About how many years and months would she have to leave the money in the account if she wants to reach her goal of saving $\$ 750$ ?

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$$
\begin{aligned}
& I=\operatorname{Prt} \\
& I=(500)(0.075)\left(\frac{9}{12}\right) \\
& I=28.125
\end{aligned}
$$

The interest earned is $\$ 28.13$.
2. If she would have left the money in the account for another nine months before withdrawing, how much interest would the account have earned?

$$
\begin{aligned}
& I=\operatorname{Prt} \\
& I=(500)(0.075)\left(\frac{18}{12}\right) \\
& I=56.25
\end{aligned}
$$

The account would have earned \$56.25.
3. About how many years and months would she have to leave the money in the account if she wants to reach her goal of saving $\$ 750$ ?
$750-500=250 \quad$ She would need to earn $\$ 250$ in
interest.

$$
\begin{aligned}
I & =\operatorname{Prt} \\
250 & =(500)(0.075) t \\
250 & =37.5 t \\
250\left(\frac{1}{37.5}\right) & =\left(\frac{1}{37.5}\right)(37.5) t \\
6 \frac{2}{3} & =t
\end{aligned}
$$

It would take her 6 years and 8 months to reach her goal because $\frac{2}{3} \times$
12 months is 8 months.

