Compund Interest formula – an example

\[
P = \frac{A \left( \frac{r}{n} \right)^{nt}}{\left(1 + \frac{r}{n} \right)^n - 1}
\]

Plug in the numbers…

\[
P = \frac{120000 \left( \frac{.0725}{1} \right)}{\left(1 + \frac{.0725}{1} \right)^{1.25} - 1}
\]

Clean some things up….

\[
P = \frac{120000 \cdot .0725}{(1 + .0725)^{25} - 1}
\]

So what we do first … well, we could do a couple things. Lets multiply the top first:

\[
P = \frac{8700}{(1 + .0725)^{25} - 1}
\]

Now I’ll add the 1 and .0725 in the bottom….

\[
P = \frac{8700}{(1.0725)^{25} - 1}
\]

Then evaluate the exponent…

\[
P = \frac{8700}{5.753505352 - 1}
\]

Keep all the decimals in there that you see in your calculator… do not round up. Next, subtract the 1…
\[ P = \frac{8700}{4.753505352} \] Now divide……

\[ P = \$1512.12 \]