Homework 1.1.b

```maple
restart;

Define ODE:

\[
\text{de} := \frac{d^2}{dt^2} y(t) + y(t) = \sin(1.1 \cdot t);
\]

\[
\text{de} := \frac{d^2}{dt^2} y(t) + y(t) = \sin(1.1 \cdot t)
\]  \hspace{1cm} (1)

Define initial conditions:

\[
\text{ics} := y(0) = 0, \frac{dy}{dt}(0) = 0;
\]

\[
\text{ics} := y(0) = 0, \frac{dy}{dt}(0) = 0
\]  \hspace{1cm} (2)

Obtain particular solution:

\[
\text{Psol} := \text{dsolve}(\{\text{de}, \text{ics}\}, y(t));
\]

\[
\text{Psol} := y(t) = \frac{110}{21} \sin(t) - \frac{100}{21} \sin\left(\frac{11}{10} t\right)
\]  \hspace{1cm} (3)

Plot particular solution:

\[
\text{plot}(\text{rhs}(\text{Psol}), t=0..140);
\]
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