0) New users may have bad default output settings.
Change settings at top menu bar:

Tools / Options / Display

Set Output display to "2-D Math Notation"
and at bottom of this options dialog box, click "apply globally"

(of course, you can customize your Maple however you want.)

Exercises:

1) to solve
2)

$$u' + ku = k A(t)$$
$$(e^{kt} u)' = k e^{kt} A(t)$$

if you use a definite integral to antidifferentiate:

$$e^{kt} u(t) = C + \int_0^t k e^{kr} A(r) dr$$

@ $t = 0$, $u_0 = C + 0$ so $C = u_0$

$$\boxed{u(t) = e^{-kt} u_0 + e^{-kt} \int_0^t k e^{kr} A(r) dr}$$

- e^a is exp(a)
- int (f(t), t); yields antiderivative (with no + C)
  int (f(s), s = a..b); yields $\int_a^b f(s) ds$
- to define a function, e.g. $f(t) = e^t \cos t$
  $f := t \rightarrow \exp(t) * \cos(t)$;

  (or, $f := $ unapply (exp(t) * cos (t), t); also works)
- Maple's not great at simplifying, but you can try the command "simplify"

3) If a function is defined with free parameters,

e.g.
$f(t) = e^{kt} \sin(wt)$

if you then define
$k := 2$; $w := \pi/12$;

then Maple updates f,
which becomes
$f(t) = e^{2t} \sin \frac{\pi}{12} t$.

capital!
↓
(Pi is Maple for π)

vertical quote.

→ to return a variable to letter form use unassign:

e.g. unassign('k', 'omega');