

QUESTION 4

```
commandwindow

clear

clc

syms t k a w
philip = (k*exp(-a*t))*cos(w*t)
phil = laplace (philip)
pretty (phil)
```

philip =

$k \exp(-a t) \cos(t w)$

phil =

$(k(a + s)) / ((a + s)^2 + w^2)$

$k(a + s)$

$^2 \quad ^2$

$(a + s) + w$