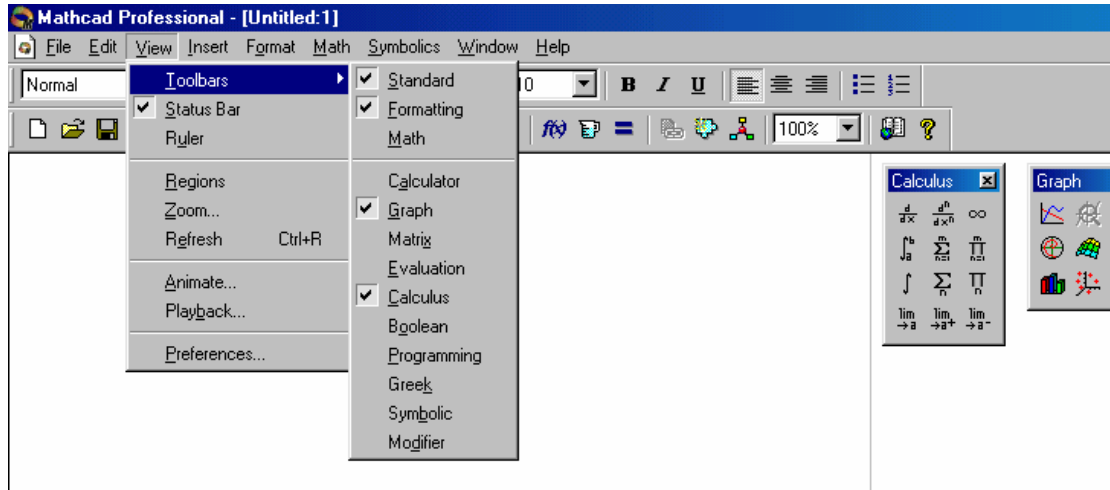


USING MATHCAD TO EVALUATE INTEGRALS

Suppose we wish to evaluate the following integral. $A = 4 \int_1^3 \{\sin(\omega t)\}^2 dt$

Using View tool bar bring up the calculus tool bar.



First enter the value of ω using the colon key. Click on the integration with limits sign and fill in the boxes. Complete the operation by typing = and you get the following result.

$\omega := 5$ use colon key

$\int_1^3 4(\sin(\omega \cdot t))^2 dt = 4.089$

use asterix key use the = key

use the ^ key

INTEGRATION AND DIFFERENTIATION OF FUNCTIONS

Type the expression to be integrated e.g. $y = 4(\sin(x))^2$

The x will be red. Place the cursor next to the x and on the menu go SYMBOLIC – VARIABLE and click on what you want to do. Clicking on integrate produces the following.

$$y := 4 \cdot (\sin(x))^2$$

$$-2 \cdot \sin(x) \cdot \cos(x) + 2 \cdot x$$

