

1. Plot $2e^{-x}\text{Cos}x$ vs x , $0.5 \leq x \leq 20\pi$
2. Define v as syms v . Use subs command to find value of the volume of a sphere of radius $v = 5$.
3. Find roots of $2x^3 - 3x^2 + 2x = -5$
4. Find $\int_0^5 e^{-x} \text{Sin}x dx$
5. Find $\frac{d^2}{dx^2}(5e^{-x} \text{Sin}5x)$ at $x = 6.0$
6. Solve $\begin{bmatrix} 2 & 3 & 1 \\ 2 & 1 & 5 \\ -3 & 6 & 7 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} 6.5 \\ 5.5 \\ 6.5 \end{bmatrix}$
7. Regress $(1,5), (2,7), (3.5,8), (9,10)$ to a first order polynomial. Plot the points and draw the regression polynomial.
8. Plot $y = 5e^x$, $0 \leq x \leq 10.0$ on xy plot
9. Plot $y = 5e^x$, $0 \leq x \leq 10.0$ on semilog plot
10. Plot $y = 5e^x$, $0 \leq x \leq 10$ on log-log plot
11. Plot $y = 10^{3x}$, $0 \leq x \leq 5.0$ on log-log plot
12. $a = \begin{bmatrix} 1 & 8 \\ 3 & 4 \end{bmatrix}$ $b = \begin{bmatrix} 1 & -1 \\ 2 & 3 \end{bmatrix}$
Verify $a * b$ and $a \cdot * b$
13. Appreciate difference between $3 \wedge 2 \wedge 4$, $(3 \wedge 2) \wedge 4$, and $(3) \wedge (2 \wedge 4)$.