

#### Sample 4

y1 and y2 are defined as follows:

$$y_1 = \frac{3(x+1)^2 \sin\left(\frac{\pi}{6}x\right)}{x+3}$$

$$y_2 = \frac{40 \ln(2+x^3) \cos\left(\frac{\pi}{4}x\right)}{x^2+4x+7}$$

Plot y1 and y2 versus x, both on the same graph, for  $1 \leq x \leq 5$  using the colors red and blue for y1 and y2. Use a stepsize of .001 to define the array of values of x. The graph should look exactly like the one shown below. In particular, the two curves must cross the left and right vertical axes in exactly the same places as on the graph shown below.

NOTE:  $\ln(x)$  in MATLAB is  $\log(x)$  .

NOTE: In MATLAB,  $\pi$  is given by  $\pi$  .

