TrigDemo.m

```
% Code for demonstrating some elementary MATLAB functions and capabilities.
% Four plots are drawn, each with a trigonometric function.

% First, create a vector with 1000 equally spaced values running from
% 0 to 1.  This vector will be called t.

t = [0:1/999:1];

% Now create a vector x1 of corresponding values of the cosine function
% (with frequency 3).

x1 = cos(2*pi*3*t);

% Make a 2x2 grid of plots and plot this cosine function in the upper-left
% position.  (If there were only going to be a single plot, then this
% command would be unnecessary.)

subplot(2,2,1);
plot(t,x1);

% For the second plot, compute the values of the sine function (also with
% frequency 3).

x2 = sin(2*pi*3*t);

% Plot the sine function in the upper-right position.

subplot(2,2,2);
plot(t,x2);

% For the third plot (lower-left position), plot BOTH the cosine and sine
% functions together.  Use a dotted line for the cosine and a solid line
% for the sine.

subplot(2,2,3);
plot(t,x1,':',t,x2,'-');

% Finally, compute the values of the sum of the sine and cosine functions,
% divided by the square root of 2.  This should look just like the sine and
% cosine functions, but shifted, that is, at a different phase.

x3 = (x1 + x2) / sqrt(2);

% Plot this last function in the lower right position.

subplot(2,2,4);
plot(t,x3);
```

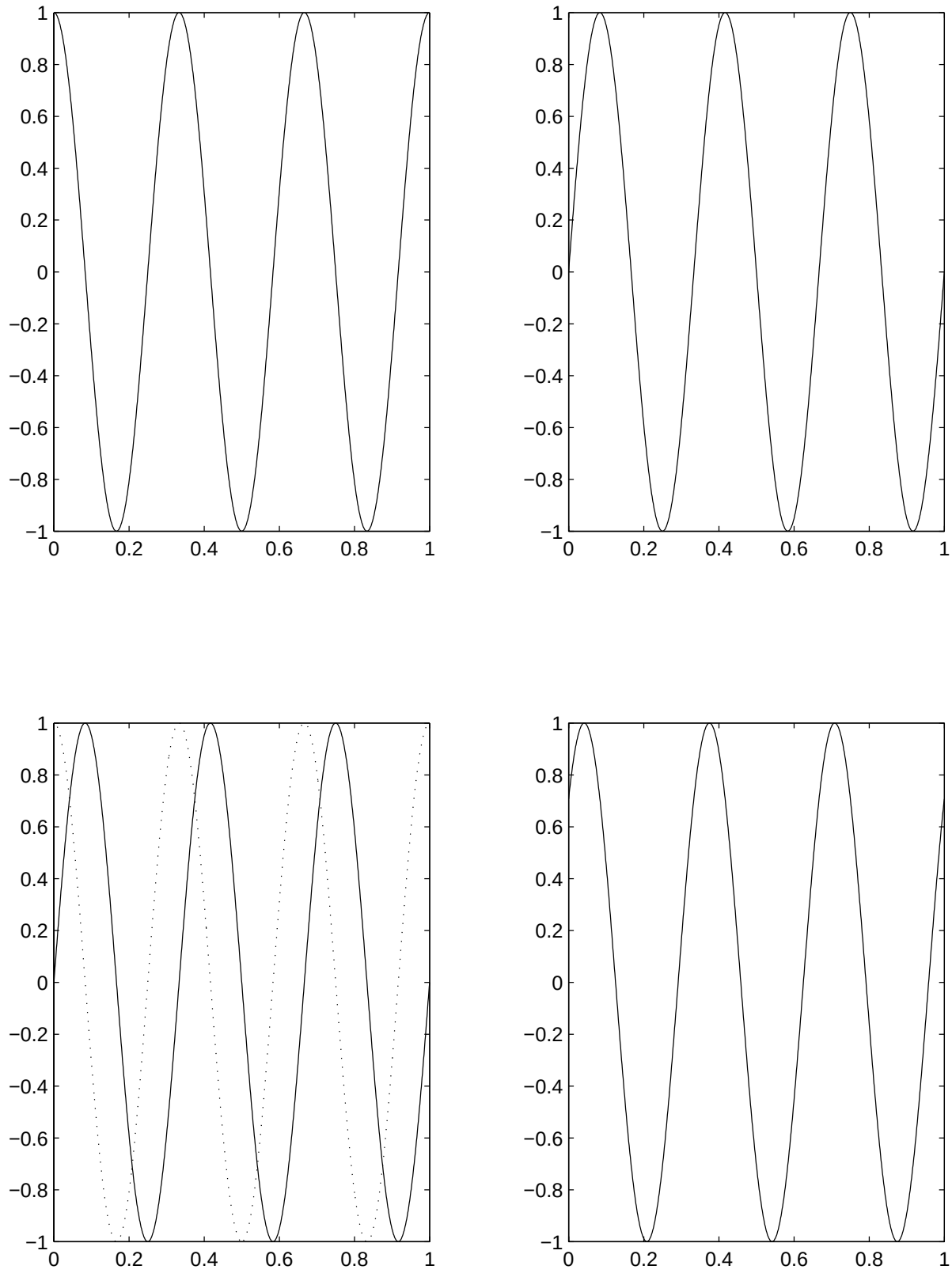

Figure 1: Screen output from `TrigDemo.m`.