

NAME : ANSWERS

1. Give all MATLAB commands to compute the coefficients of the cubic polynomial  $p$  to fit the sine function over the interval  $[0, 2\pi]$  using 21 samples.

Give also the coefficients of that polynomial  $p$ .

```
>> t = 0:2*pi/20:2*pi;           % range to compute 21 samples
>> y = sin(t);                   % sample the sine function
>> p = polyfit(t,y,3)            % coefficients of cubic fit
```

$p =$

```
0.0886    -0.8347    1.7861    -0.1192
```

2. Write a MATLAB function to implement the composition of two functions.

Complete:

```
function y = compose(f,g,x)
%
% returns f(g(x))
%
y = feval(f,feval(g,x));
```

Give is the MATLAB command to compute  $\sin(\cos(3))$ , using compose:

```
>> compose('sin','cos',3)           % mind the quotes!
```

**Alternative:** Bring to class on Monday the printout of the file created with diary to solve assignments 1,3 of MATLAB Lecture 3; assignments 3,7 of MATLAB Lecture 4; and assignment 4 of MATLAB Lecture 5.