

# Software Tools Evaluation

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1. Write a function test(N), Which will run through values 1 to N. And for each value N it will display N is divisible by 2 and/or 5. Or it is not divisible by 2 and/or 5 (Use for loop).

```
function test(n)
    for i = 1:n
        byTwo = ~rem(i, 2);
        byFive = ~rem(i, 5);
        printf("Testing %d: ", i);
        if byTwo && byFive
            puts("Divisible by two and five\n");
        elseif byTwo
            puts("Divisible by two only\n");
        elseif byFive
            puts("Divisible by five only\n");
        else
            puts("Not Divisible by two or five\n");
        end
    end
end
```

## Command Window

```
>> test(10)
Testing 1: Not Divisible by two or five
Testing 2: Divisible by two only
Testing 3: Not Divisible by two or five
Testing 4: Divisible by two only
Testing 5: Divisible by five only
Testing 6: Divisible by two only
Testing 7: Not Divisible by two or five
Testing 8: Divisible by two only
Testing 9: Not Divisible by two or five
Testing 10: Divisible by two and five
>> |
```

2. For  $f(x) = x^3 - 6x^2 + 11x - 6$  compute  $f(3)$  and roots of  $f(x)$ . Also plot the same for  $0 \leq x \leq 20$

```
clc;
clear all;

p = [1 -6 11 -6];

valueAtThree = polyval(p, 3)

roots = roots(p)

x = [0:0.1:20];
plot(x, polyval(p, x));
```

Command Window

```
valueAtThree = 0
roots =
```

```
3.0000
2.0000
1.0000
```

```
>> |
```

