# Name :- Nisarg Amlani
# Roll :- ce001
# ID :- 22ceueg082
# Lab :- 3

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## 1. Compute tan(x)

**=> x = 45**

**Code:**

```
data segment
th dd 45.0
d dd 180.0
pi dd 3.1428
res dd ?
data ends

code segment

assume cs:code , ds:data
start:
mov ax, data
mov ds, ax
finit
fld th
fldpi
fmul
fdiv d
fptan
fxch
fst res
int 03h
code ends
end start
```

**Output :**


## 2. Compute sin(x)

**=> x = 60**

**Code :**

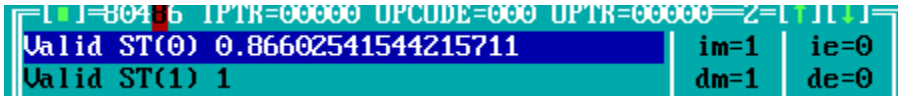
```
data segment
th dd 60.0
d dd 180.0
one dd 1.0
res dd ?
data ends

code segment

assume cs:code , ds:data
start:
mov ax, data
mov ds, ax
finit
fld th
fldpi
fmul
fdiv d
fptan
fxch
fst res
fld one
fld res
fmul res
fadd
fsqrt
fdiv
fst res
int 03h
```

code ends
end start

**Output :**




## 3. Compute cos(x)

**=> x = 60**

**Code :**

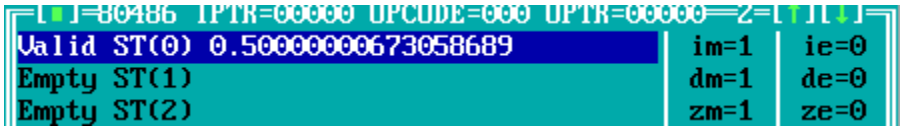
```
data segment
th dd 60.0
d dd 180.0
one dd 1.0
res dd ?
data ends

code segment

assume cs:code , ds:data
start:
mov ax, data
mov ds, ax
finit
fld th
fldpi
fmul
fdiv d
fptan
fxch
fstp res
fld one
fld res
fmul res
fadd
fsqrt
fdiv
```

```
fst res
int 03h
code ends
end start
```

**Output:**




## 5. Compute xsqrt(y) + ysqrt(x)

**=> x= 4.0 , y = 4.0**

**Code:**

```
data segment
x dd 4.0
y dd 4.0
res dd ?
data ends

code segment

assume cs:code , ds:data
start:
mov ax, data
mov ds, ax
finit
fld x
fld y
fsqrt
fmul
fld y
fld x
fsqrt
fmul
fadd
fst res

int 03h
code ends
```

```
end start
```

**Output :**


## 6. Find resonance frequency

**=> l = 4.0 , c = 4.0**

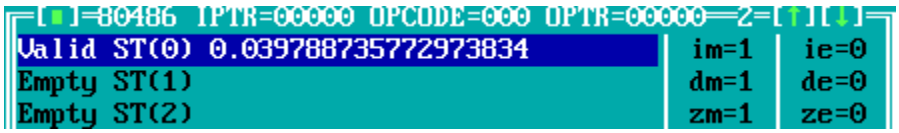
**Code : .**

```
data segment
c1 dd 2.0
c2 dd 1.0
l dd 4.0
c dd 4.0
res dd ?
data ends

code segment

assume cs:code , ds:data
start:
mov ax, data
mov ds, ax
finit
fld c2
fld l
fmul c
fsqrt
fmul c1
fldpi
fmul
fdiv
fst res
int 03h
code ends
end start
```

**Output:**




## 7. Compute tan inverse (y/x)

**=> x = 1.0 y = 1.0**

**Code :**

```
data segment
x dd 1.0
y dd 1.0
c1 dd 180.0
res dd ?
data ends

code segment

assume cs:code , ds:data
start:
mov ax, data
mov ds, ax
finit
fld y
fld x
fpatan
fmul c1
fldpi
fdiv
fst res
int 03h
code ends
end start
```

**Output:**

## 8. Compute area of a cone.

**=> l = 2.0,  r = 2.0**

**Code :**

```
data segment
l dd 2.0
r dd 2.0
c1 dd 180.0
res dd ?
data ends

code segment

assume cs:code , ds:data
start:
mov ax, data
mov ds, ax
finit
fldpi
fld l
fld r
fadd
fmul
fmul r
fst res
int 03h
code ends
end start
```

**Output:**