

<https://youtu.be/mdhK35Vzy-c>

Part I (8 Points)

1. Which of the following is the denormalized equivalent of binary 1.1101×2^3 ?

- a. 111.01
- b. 11.101
- c. 1110.1
- d. 11101.0

2. Which of the following is the denormalized equivalent of binary 1.01×2^{-4} ?

- a. .01010
- b. .00101
- c. .000101
- d. 1.0101

3. Which of the following is the normalized version of positive binary 1101.101?

- a. 1.101101×2^3
- b. 1.101101×2^4
- c. 1.101101×2^5
- d. 1.101101×2^2

4. Which of the following is the binary real equivalent of $3/16$?

- a. .011
- b. .0111
- c. .0011
- d. .101

```
; Program Template (lastlab.asm)
; Program Description: calculates and displays the area of circle
; Author: Timothy Bryant
; Creation Date: 5/8/21
; Revisions:
; Date:
; Modified by:
.386
.model flat,stdcall
.stack 4096
ExitProcess Proto, dwExitCode:DWORD
INCLUDE Irvine32.inc
INCLUDE macros.inc

.data
```

```

; declare variables here

readRadius BYTE "Enter the radius of the circle: ",0
displayArea BYTE "The area of the circle is: ",0

displayError BYTE "INVALID INPUT",0

f1 DWORD 0

.code
main PROC
;write your code here

finit    ;intialize FPU

radius:
mov edx, OFFSET readRadius ;display prompt to user
call WriteString
call ReadFloat

fild f1      ;set 0 on stack

fcomip ST(0), ST(1) ;compare input and 0
jae L1

fmul ST(0), ST(0)      ;square the radius

fldpi              ;set pi ( $\pi$ ) on stack

fmul ST(0), ST(1)      ;multiple pi by radius square

mov edx, OFFSET displayArea ;display area
call WriteString
call WriteFloat
jmp bye

L1:
mov edx, OFFSET displayError ;display error
call WriteString
call Crlf
jmp radius

bye:
call Crlf
call DumpRegs

INVOKE ExitProcess, 0
main ENDP
END main

```

```
Microsoft Visual Studio Debug Console
Enter the radius of the circle: 2
The area of the circle is: +1.2566370E+001

EAX=00CFFDEC  EBX=00BA7000  ECX=007B10CD  EDX=007B6021
ESI=007B10CD  EDI=007B10CD  EBP=00CFFDA0  ESP=00CFFD94
EIP=007B3D7E  EFL=00000202  CF=0  SF=0  ZF=0  OF=0  AF=0  PF=0

C:\Users\jakeb\source\repos\ConsoleApplication1\Debug\ConsoleApplication1.exe (process 19348) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```