

COAL LAB NO 10:

TASK NO 1:

```
INCLUDE Irvine32.inc
```

```
.DATA
```

```
str1 BYTE "EAX =(30/6)+(10-5)+(3*5) = " , 0
x DWORD ?
y DWORD ?
za DWORD ?
```

```
.CODE
```

```
main proc
mov edx, offset str1
call writestring
```

```
mov edx,0
mov eax,30
mov ecx,6
div ecx
mov x,eax
```

```
mov eax,10
sub eax,5
mov y , eax
```

```
mov edx , 0
mov eax,3
mov ebx,5
mul ebx
mov za,eax
```

```
mov eax , x
add eax , y
add eax , za
```

```
call WriteDec
```

```
call crlf
call waitmsg
exit
MAIN ENDP
END main
```

OUTPUT:

Microsoft Visual Studio Debug Console

```
EAX =(30/6)+(10-5)+(3*5) = 25
Press any key to continue...
```

TASK NO 2:

```
INCLUDE Irvine32.inc
```

```
.DATA
```

```
PROMPT BYTE "Multiply 25 by 4 using the shift instructions. ",0
```

```
ANS BYTE "ANSWER = ",0
```

```
NUM1 DWORD 25
```

```
NUM2 DWORD 4
```

```
.CODE
```

```
MAIN PROC
```

```
mov edx, OFFSET PROMPT
```

```
call writestring
```

```
mov edx, OFFSET ANS
```

```
call writestring
```

```
mov eax, NUM1
```

```
shl eax, 2 ; shl work as a shift left 2 ki power n that is 2 so here is 4
```

```
call writedec
```

```
call crlf
```

```
call waitmsg
```

```
exit
```

```
MAIN ENDP
```

```
END MAIN
```

OUTPUT:

Microsoft Visual Studio Debug Console

```
Multiply 25 by 4 using the shift instructions. ANSWER = 100
Press any key to continue...
```

TASK NO 3:

```
INCLUDE Irvine32.inc
```

```
.DATA
```

```
PROMPT BYTE "Multiply 18 by 8 using the shift instructions. ",0
```

```
ANS BYTE "ANSWER = ",0
```

```
NUM1 DWORD 18
```

```
NUM2 DWORD 8
```

```
.CODE
```

```
MAIN PROC
```

```

mov edx, OFFSET PROMPT
call writestring

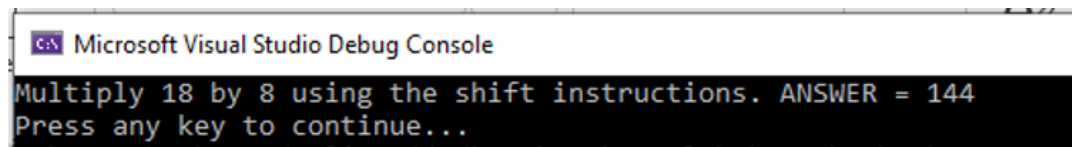
mov edx, OFFSET ANS
call writestring

mov eax, NUM1
shl eax, 3 ; shl work as a shift left 2 ki power n that is 3 so here is 8
call writedec

call crlf
call waitmsg
exit
MAIN ENDP
END MAIN

```

OUTPUT:



```

Microsoft Visual Studio Debug Console
Multiply 18 by 8 using the shift instructions. ANSWER = 144
Press any key to continue...

```

TASK NO 4:

```

INCLUDE Irvine32.inc

.DATA
PROMPT BYTE "divide 36 by 2 using the shift instructions. ",0
ANS BYTE "ANSWER = ",0
NUM1 DWORD 36
NUM2 DWORD 2

.CODE
MAIN PROC
mov edx, OFFSET PROMPT
call writestring

mov edx, OFFSET ANS
call writestring

mov eax, NUM1
shr eax, 1 ; shr work as a shift left 2 ki power n that is 3 so here is 8 divide with
num1
call writedec

call crlf
call waitmsg
exit
MAIN ENDP
END MAIN

```

```
Microsoft Visual Studio Debug Console
divide 36 by 2 using the shift instructions. ANSWER = 18
Press any key to continue...
```

TASK NO 5:

```
INCLUDE Irvine32.inc
```

```
.DATA
PROMPT BYTE "divide 100 by 4 using the shift instructions. ",0
ANS BYTE "ANSWER = ",0
NUM1 DWORD 100
NUM2 DWORD 4

.CODE
MAIN PROC
mov edx, OFFSET PROMPT
call writestring

mov edx, OFFSET ANS
call writestring

mov eax, NUM1
shr eax, 2 ; shr work as a shift left 2 ki power n that is 2 so here is 4 divide with
num1
call writedec

call crlf
call waitmsg
exit
MAIN ENDP
END MAIN
```

```
Microsoft Visual Studio Debug Console
divide 100 by 4 using the shift instructions. ANSWER = 25
Press any key to continue...
```

TASK NO 6:


```
INCLUDE Irvine32.inc
```

```
.DATA
NUM1 DWORD 49
sum DWORD 0

.CODE
MAIN PROC
mov eax, NUM1
shl eax,4
```

```
add sum,eax
mov eax , NUM1
shl eax,0
add sum,eax
mov eax , sum
call writedec
```

```
call waitmsg
exit
MAIN ENDP
END MAIN
OUTPUT:
```

 Microsoft Visual Studio Debug Console

```
833
Press any key to continue...
```