

1. Determine the outputs of the following code.

a) `double i;
for(i=0;i>-3.5;i-=0.4)
printf("%d ",(int)i);`

0 0 0 -1 -1 -2 -2 -2 -3

b) `long a=374821;
printf("%d ",((a|48)>>3)&6);`

6

c) `double x=4.2;
for(;x<6.0;)
{ printf("%4.2f ",x);
x*=1.1; }`

4.20 4.62 5.08 5.59

d) `int i=0,k=2;
for(;i<6;++i){
printf("%d_%d ",k,i);
i++;--k;
}`

2_0 1_2 0_4

e) `int i=37,k=0x1A;
if(i&k) if(k&2) printf("%d",i&k);
else printf("%d",i|k); else printf("%X",k+i);`

3F

f) `int i=37,k=4;
printf("%d%d",i/k,i%k);`

91

2. Complete the codes in order to generate the outputs given.

a) `int i=5;`

`for(i=1;i<32;i=i*2+1)`

`printf("%d ",i);`

output: 1 3 7 15 31

b) `int a=1,b=2;`
`for(;a<3;++a)`
`switch(a+1){`

`default: printf("12");`

`case 4: printf("%d",a); break;``case 5: printf("%d",b); break;``case 6: printf("121");``}`

output: 121122

3. Underline the points where the compiler is expected to generate errors. Also mark the warnings with an arrow, if there are any. Use space on the right for your explanations.

a) `int a=1; b=2;`

`a=2; long k=3;``for(;(a+b<10);a+=2,b--){``if(a) b-=1.1; ``if(b); else a+=1.1; ``} printf(" a= b= \n");`

Errors

b is an undefined identifier.

No declaration allowed within code.

Warnings

Conversions from const double to int.

b) `... /* i is an integral type */`

`switch(i,(int)i){``case 4:``case 3: break;``case -1: default:``if(i) { i=0;``}} else i=1;`

Errors

else must be inside the switch. Compiler will generate 'illegal else without matching if' error.