ID-CODE: _____

DATE: _____

Instructions:
Answer the questions in the order given.
You are allowed neither to modify the recorded time nor to go back to previous questions.

Problem 1. SET CHRONOMETER AT ZERO.

Minutes	Seconds	100ms of a second
0	0	0

>>> START CHRONOMETER <<<

Consider the C program fragment below

```
y=a;
x=y++ +b;
while ((++y<=4)&&(!(x%2= =0)))
{
      ++x;
      if(!(y++%2= =0)) x++;
}
```

(a) how many times does the body of the `while` execute if a=0, b=1?. Answer ___
(b) how many times does the body of the `while` execute if a=1, b=0?. Answer ___
(c) how many times does the body of the `while` execute if a=1, b=2?. Answer ___
(d) what is the final value of x if a=1, b=1?. Answer ___

>>> STOP CHRONOMETER AND WRITE DOWN THE TIME RECORDED <<<

Minutes	Seconds	100ms of a second

Problem 2.
SET CHRONOMETER AT ZERO.

Minutes	Seconds	100ms of a second
0	0	0

>>> START CHRONOMETER <<<

Consider the C program fragment below

```
for (i=a; i<5; i++)
{
      y=++i + a++;
      i++;
}
```

(a) what is the final value of y if a = 0?. Answer ___
(b) what is the final value of y if a = 2?. Answer ___
(c) what is the final value of y if a = 3?. Answer ___
(d) how many times does the body of the `for` sentence if a =1. Answer ___

>>> STOP CHRONOMETER AND WRITE DOWN THE TIME RECORDED <<<

Minutes	Seconds	100ms of a second

Problem 3.
SET CHRONOMETER AT ZERO.

Minutes	Seconds	100ms of a second
0	0	0

>>> START CHRONOMETER <<<

Consider the C program fragment below

```
for (i=a; i<n; i++)
{
    m=i-1;
    for (j=m; j<n; j++){
        if (!(j++= =i) && (++b>1)) ++b;
        b++;
     }
}
```

(a) what is the final value of b if a=0, n=2, b=0?. Answer ___
(b) what is the final value of b if a=1, n=2, b=1?. Answer ___
(c) what is the final value of b if a=0, n=3, b=2?. Answer ___

>>> STOP CHRONOMETER AND WRITE DOWN THE TIME RECORDED <<<

Minutes	Seconds	100ms of a second

Problem 4.
SET CHRONOMETER AT ZERO.

Minutes	Seconds	100ms of a second
0	0	0

>>> START CHRONOMETER <<<

Given the C program fragment below

```
while (i <=7 )
{
      a = ++i+b;
      if (!(++i%3= =0)) ++a;
      if(a%2= =0) ++a;
}
```

(a) what is the final value of a if i=0, b=0?. Answer ___
(b) what is the final value of a if i=1, b=1?. Answer ___
(c) what is the final value of a if i=3, b=2?. Answer ___

>>> STOP CHRONOMETER AND WRITE DOWN THE TIME RECORDED <<<

Minutes	Seconds	100ms of a second