How many times will "Hello, World" be printed in the below program?

```c
#include <stdio.h>
int main() {
    int i = 1024;
    for(; i; i >>= 1)
        printf("Hello, World");
    return 0;
}
```

i >>= 1
i = i >> 1

i = 1024

1024 = 100 0000 0000

512 = 010 0000 0000

256 = 001 0000 0000
              .
              .
              .

1 = 000 0000 0001

0 = 000 0000 0000

How many times will "Hello, World" be printed in the below program?

```c
#include <stdio.h>
int main() {
    int i = 1024;
    for(; i; i >>= 1)
        printf("Hello, World");
    return 0;
}
```

a) 10
b) 11 ✓
c) infinite
d) compile time error

What is the output of the following C program fragment?

```c
#include <stdio.h>
int main()
{
    int i;
    for(i=0; i<20; i++)
    {
        switch(i)
        {
            case 0: i += 5;
            case 1: i += 2;
            case 5: i += 5;
            default: i += 4;
        }
        printf("%d ", i);
    }
}
```

a) 5 10 15 20

There is no **break;** after cases

NESO ACADEMY

What is the output of the following C program fragment?

```c
#include <stdio.h>
int main()
{
    int i;
    for(i=0; i<20; i++)
    {
        switch(i)
        {
            case 0: i += 5;
            case 1: i += 2;
            case 5: i += 5;
            default: i += 4;
        }
        printf("%d ", i);
    }
}
```

a) 5 10 15 20
b) 7 12 17 22
c) Compiler error
d) ✓ 16 21

NESO ACADEMY

How many **times** will "Neso" be printed on the screen?

```
int i = -5;
while(i <= 5)
{
    if(i >= 0)
        break;
    else
    {
        i++;
        continue;
    }
    printf("Neso");
}
```

i = -5   i = -4   i = -3

continue;   continue;   continue;

i = -2   i = -1   i = 0

continue;   continue;   break;

How many times will "Neso" be printed on the screen?

```
int i = -5;
while(i <= 5)
{
    if(i >= 0)
        break;
    else
    {
        i++;
        continue;
    }
    printf("Neso");
}
```

a) 10 times
b) 5 times
c) Infinite times
d) 0 times ✓

What is the output of the following C program fragment?

```c
int main()
{
    int i = 0;
    for(printf("one\n"); i < 3 && printf(""); i++)
    {
        printf("Hi!\n");
    }
    return 0;
}
```

What is the output of the following C program fragment?
Assuming size of unsigned int is 4 bytes.

```c
#include <stdio.h>
int main()
{
    unsigned int i = 500;
    while(i++ != 0);
    printf("%d", i);
    return 0;
}
```

Range of unsigned int (4 bytes)
0 to 4294967295

When i reaches 4295967295, then because of i++, it comes back again to 0

As 0 not equal to 0 is false therefore we come outside of the while loop.

After we come out of the loop, i will contain 1 because of post increment operator. Therefore, 1 will be printed on the screen.

What is the output of the following C program fragment?
Assuming size of unsigned int is 4 bytes.

```c
#include <stdio.h>
int main()
{
    unsigned int i = 500;
    while(i++ != 0);
    printf("%d", i);
    return 0;
}
```

a) Infinite loop
b) 0
c) 1 ✓
d) Compiler error

What is the output of the following C program fragment?

```
#include <stdio.h>
int main()
{
    int x = 3;
    if(x == 2); x = 0;
    if(x == 3) x++;
    else x += 2;

    printf("x = %d", x);
    return 0;
}
```

a) x = 4

b) ✓ x = 2

c) Compiler error

d) x = 0