

## I2010 : langage C (TP3)

### Pointeurs et gestion dynamique de la mémoire

#### 1. Exercice de compréhension

Ci-dessous quelques déclarations et instructions, après chaque instruction, complétez le dessin pour montrer le contenu des variables.

```
int main()
{
    int x = 1;
    int y = 1;
    int t[4] = {3, 4};
    int *ptr1, *ptr2;

    ptr1=&x;
    ptr2=t;
```

**x**

**y**

**PTR1**

**PTR2**

**t**

--	--	--	--

```
(*ptr1)++;
```

**x**

**y**

**PTR1**

**PTR2**

**t**

--	--	--	--

`ptr2++;`

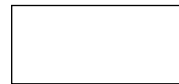
**x**

**y**

**PTR1**

**PTR2**

**t**



`*(t+y) = *ptr1;`

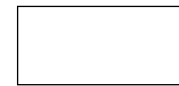
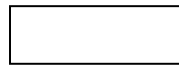
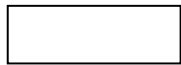
**x**

**y**

**PTR1**

**PTR2**

**t**



`ptr1 = ptr2 + x;`

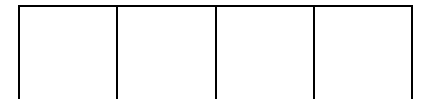
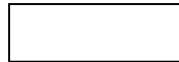
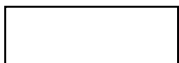
**x**

**y**

**PTR1**

**PTR2**

**t**



```
ptr1 = &(t[x+1]);
```

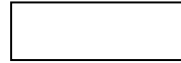
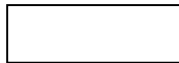
**X**

**y**

**PTR1**

**PTR2**

**t**



```
y = (*ptr1)++;
```

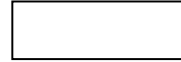
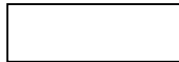
**X**

**y**

**PTR1**

**PTR2**

**t**



```
x = ptr1-t;
```

**X**

**y**

**PTR1**

**PTR2**

**t**

