

```
#include <iostream>

int main() {
    int x = 3;
    int y = 2;

    int* p = &x;           // Declare a pointer to x
    int* q = &y;           // Declare a pointer to y

    p = q;                // Point the pointer p to the address of q which points to y

    *p = 42;              // Overwrite the value stored at the address of p. This overwrites y!

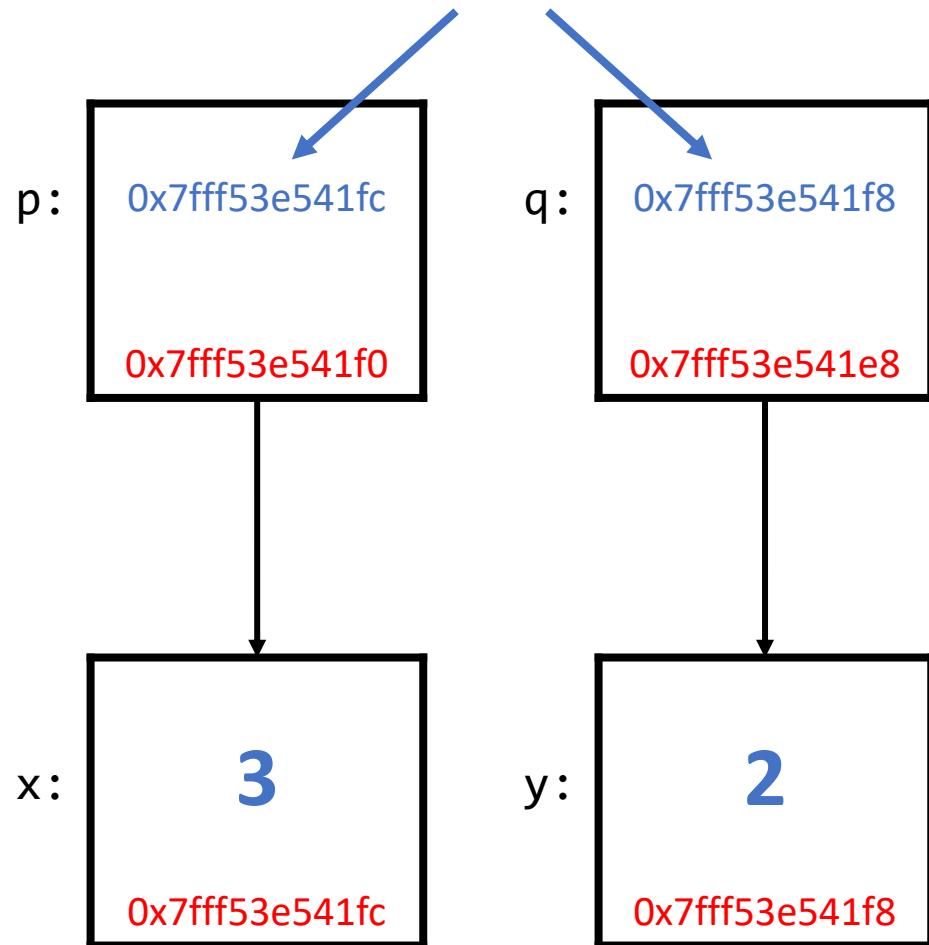
    /*
    p and q now both point to y.
    The value of x is still 3, but the value of y is 42
    */

    return 0;
}
```

Code has run to here, next line to execute

Values stored.

These are the addresses of **x** and **y**



```
#include <iostream>

int main() {
    int x = 3;
    int y = 2;

    int* p = &x;      // Declare a pointer to x
    int* q = &y;      // Declare a pointer to y
    p = q;           // Point the pointer p to the address of q which points to y
    *p = 42;         // Overwrite the value stored at the address of p. This overwrites y!

    /*
    p and q now both point to y.
    The value of x is still 3, but the value of y is 42
    */

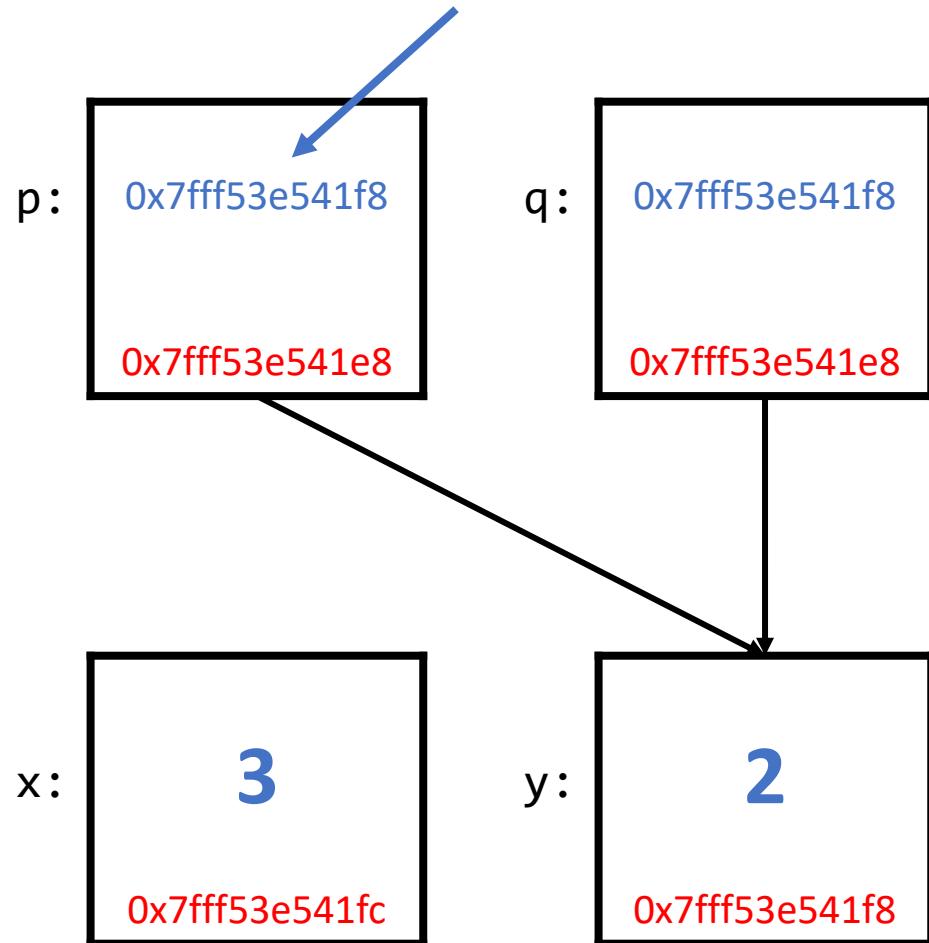
    return 0;
}
```

Code has run to here , next line to execute

// Point the pointer p to the address of q which points to y

// Overwrite the value stored at the address of p. This overwrites y!

Update **p** to point to the memory location of **y**



```
#include <iostream>

int main() {
    int x = 3;
    int y = 2;

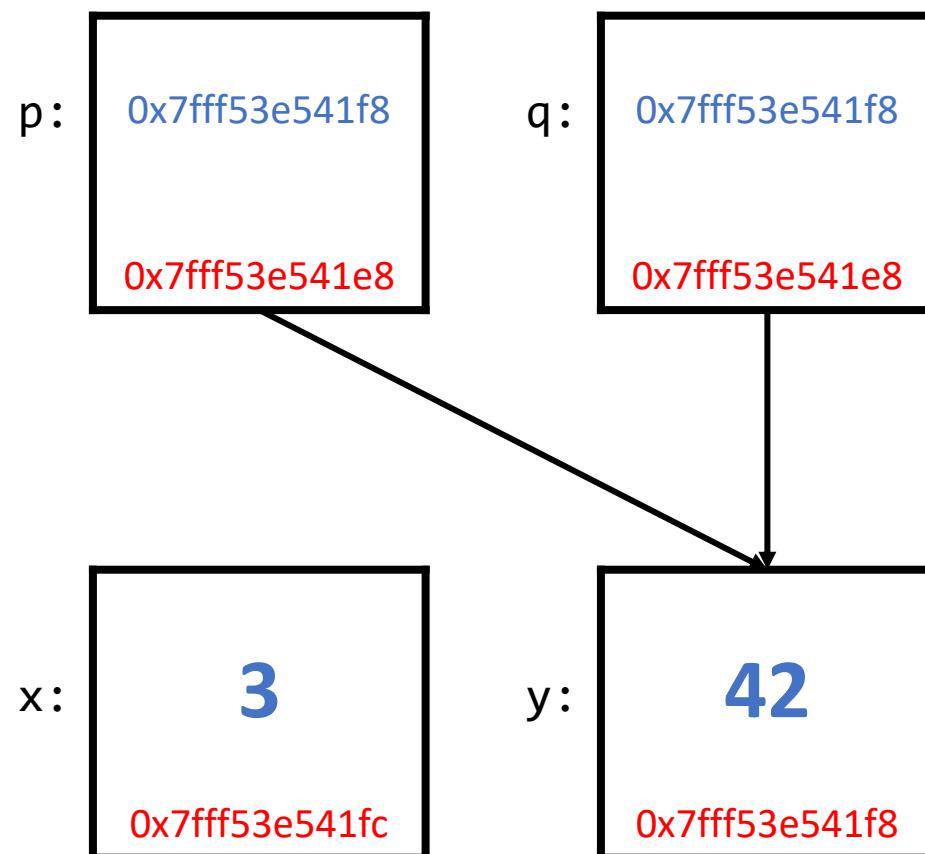
    int* p = &x;      // Declare a pointer to x
    int* q = &y;      // Declare a pointer to y

    p = q;           // Point the pointer p to the address of q which points to y
    // Code has run to here , next line to execute
    *p = 42;         // Overwrite the value stored at the address of p. This overwrites y!

    /*
    p and q now both point to y.
    The value of x is still 3, but the value of y is 42
    */

    return 0;
}
```

Update value of **y** using pointer **p** to 42



```
#include <iostream>

int main() {
    int x = 3;
    int y = 2;

    int* p = &x;      // Declare a pointer to x
    int* q = &y;      // Declare a pointer to y

    p = q;          // Point the pointer p to the address of q which points to y

    *p = 42;        // Overwrite the value stored at the address of p. This overwrites y!

    /*
    p and q now both point to y.
    The value of x is still 3, but the value of y is 42
    */

    return 0; ← Code has run to here, next line to execute.
}
```

Program would end.