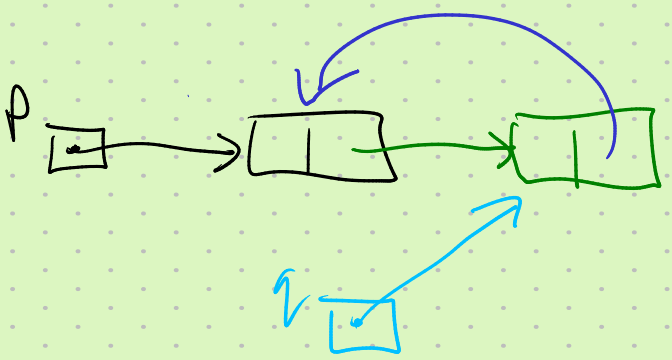
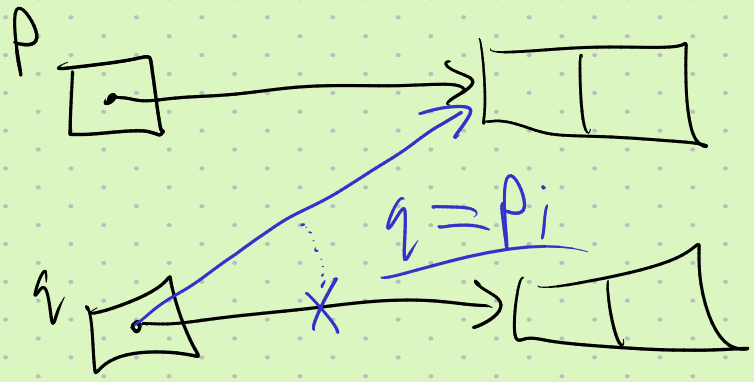
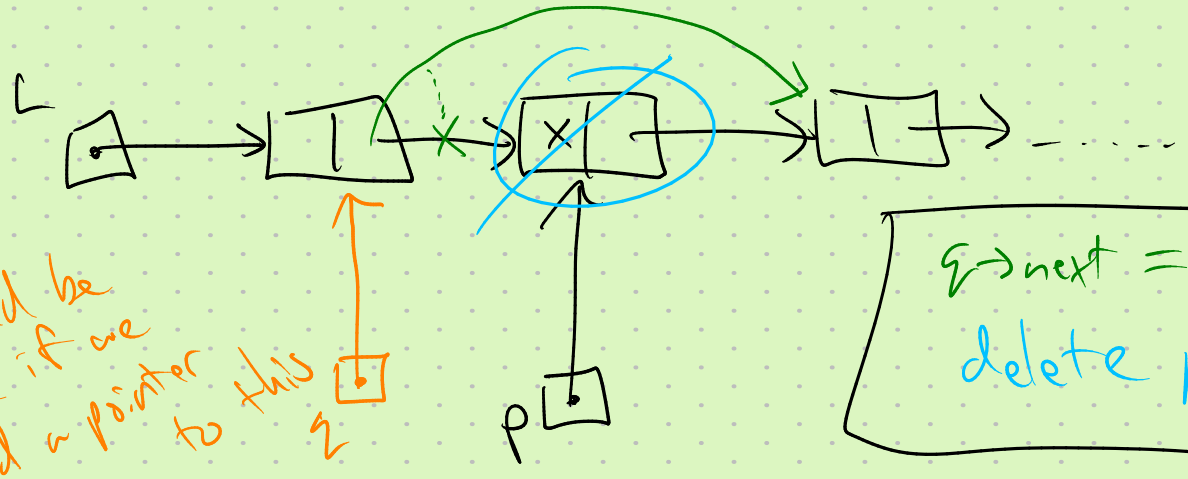
Try to draw the picture corresponding to this code:

```
① node * p = new node;
② p->next = new node;
③ node * q = p->next;
④ q->next = p;
```

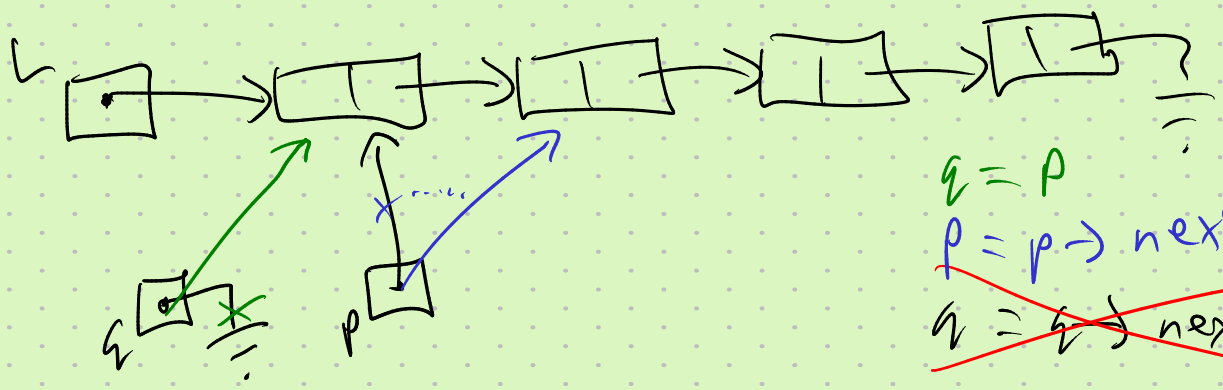




Exercise: given a list and value x, search for x and remove the first occurrence.



Alternatively, have q follow p through the list as we search.




```
node * p = L;
node * q = NULL;
while (p != NULL && p->data != x) {
    q = p;
    p = p->next;
}
```

X && Y == Y && X ? Not in C++! (short-circuit evaluation)

```
//??? why did loop end? found x, or reached end of list.
if (p == NULL) return false;
// found x; p tells us the location.

//q->next = p->next;   // almost! but what if x found in the first node? ⇒ q == NULL
//delete p;
if (q) q->next = p->next;
else   L = p->next;
delete p; return true;
```