

```
class IntBox {
    static void doNothing(int x) {
        x = 2;
    }

    public int i;

    static void set3(IntBox ib) {
        ib.i = 3;
    }

    static void badSet4(IntBox ib) {
        ib = new IntBox();
        ib.i = 4;
    }
}
```

Examples of method calls:

```
[1]  int a = 1;
      doNothing(a);

[2]  IntBox b = new IntBox();
      set3(b);

[3]  badSet4(b);
```

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Binary search algorithm:

```
public static final int FAILURE = -1;

private static int bsearch(int[] i, int left, int right, int findMe) {
    if (left > right) {
        return FAILURE; // Base case 2: subarray of size zero.
    }
    int mid = (left + right) / 2; // Halfway between left and right.
    if (findMe == i[mid]) {
        return mid; // Base case 1: success!
    } else if (findMe < i[mid]) {
        return bsearch(i, left, mid - 1, findMe); // Search left half.
    } else {
        return bsearch(i, mid + 1, right, findMe); // Search right half.
    }
}

public static int bsearch(int[] i, int findMe) {
    bsearch(i, 0, i.length - 1, findMe);
}
```