```
void f(const int * const p)
{
  int j;

  *p = 0;    /*** WRONG ***/
  p = &j;    /*** WRONG ***/
}
```

Exercises

Section 11.2

1. If `i` is a variable and `p` points to `i`, which of the following expressions are aliases for `i`?

   (a) `*p` (c) `*&p` (e) `*i` (g) `*&i`
   (b) `&p` (d) `&*p` (f) `&i` (h) `&*i`

Section 11.3

W 2. If `i` is an `int` variable and `p` and `q` are pointers to `int`, which of the following assignments are legal?

   (a) `p = i;` (d) `p = &q;` (g) `p = *q;`
   (b) `*p = &i;` (e) `p = *&q;` (h) `*p = q;`
   (c) `&p = q;` (f) `p = q;` (i) `*p = *q;`

Section 11.4

3. The following function supposedly computes the sum and average of the numbers in the array `a`, which has length `n`. `avg` and `sum` point to variables that the function should modify. Unfortunately, the function contains several errors; find and correct them.

```
void avg_sum(double a[], int n, double *avg, double *sum)
{
  int i;

  sum = 0.0;
  for (i = 0; i < n; i++)
    sum += a[i];
  avg = sum / n;
}
```

W 4. Write the following function:

```
void swap(int *p, int *q);
```

When passed the addresses of two variables, `swap` should exchange the values of the variables:

```
swap(&i, &j);   /* exchanges values of i and j */
```

5. Write the following function:

```
void split_time(long total_sec, int *hr, int *min, int *sec);
```

`total_sec` is a time represented as the number of seconds since midnight. `hr`, `min`, and `sec` are pointers to variables in which the function will store the equivalent time in hours (0–23), minutes (0–59), and seconds (0–59), respectively.

W 6. Write the following function:

```
void find_two_largest(int a[], int n, int *largest,
                      int *second_largest);
```