

- (b) `void f(double);`
- (c) `void f(x);`
- (d) `f(double x);`

## Section 9.3

- \*9. What will be the output of the following program?

```
#include <stdio.h>

void swap(int a, int b);

int main(void)
{
    int i = 1, j = 2;

    swap(i, j);
    printf("i = %d, j = %d\n", i, j);
    return 0;
}

void swap(int a, int b)
{
    int temp = a;
    a = b;
    b = temp;
}
```

- W 10. Write functions that return the following values. (Assume that `a` and `n` are parameters, where `a` is an array of `int` values and `n` is the length of the array.)
- (a) The largest element in `a`.
  - (b) The average of all elements in `a`.
  - (c) The number of positive elements in `a`.

11. Write the following function:

```
float compute_GPA(char grades[], int n);
```

The `grades` array will contain letter grades (A, B, C, D, or F, either upper-case or lower-case); `n` is the length of the array. The function should return the average of the grades (assume that A = 4, B = 3, C = 2, D = 1, and F = 0).

12. Write the following function:

```
double inner_product(double a[], double b[], int n);
```

The function should return `a[0] * b[0] + a[1] * b[1] + ... + a[n-1] * b[n-1]`.

13. Write the following function, which evaluates a chess position:

```
int evaluate_position(char board[8][8]);
```

`board` represents a configuration of pieces on a chessboard, where the letters K, Q, R, B, N, P represent White pieces, and the letters k, q, r, b, n, and p represent Black pieces. `evaluate_position` should sum the values of the White pieces (Q = 9, R = 5, B = 3, N = 3, P = 1). It should also sum the values of the Black pieces (done in a similar way). The function will return the difference between the two numbers. This value will be positive if White has an advantage in material and negative if Black has an advantage.

## Section 9.4

14. The following function is supposed to return `true` if any element of the array `a` has the value 0 and `false` if all elements are nonzero. Sadly, it contains an error. Find the error and show how to fix it: