Practice Test 1 Answer keys

1. 4
2.

```
*

**

***

***

***
```

3. 36
4. 6
5. 2
6. 4
7. 2 2
8. 8
9. 1101
10. 0
11. 3 6
12. 2 7 6 9
13. B
14. C
15. B

Free response questions

16.

In the second line, "2PI" is not a valid identifier, as it starts with a digit.

In the third line, the return type should be int, not double.

In the sixth line, "*i" is not a valid expression, as "i" is not a pointer. A valid alternative would be "p = &i;".

In the seventh line, identifier "a" is used but it was not previously declared.

17.

```
double power(double x, int n) {

    if(n==0)
        return 1;
    else
        return x * power(x, n-1);
}
```

18.

```
void reverse(int a[], int n) {

    // solution 1

    int start = 0, end = n-1;
    while(start < end) {
        int temp = a[start];
        a[start] = a[end];
        a[end] = temp;
        start++;
        end--;
    }

    // solution 2

    for(int i=0; i < n/2; i++) {
        int temp = a[i];
```

```
        a[i] = a[n-i-1];
        a[n-i-1] = temp;
    }
  }
```

19.

```
char to_lower_case(char ch) {

    if(ch >= 'A' && ch <= 'Z')
        return ch - 'A' + 'a';
    else
        return ch;

  }
```

20.

```
  int find_elements(int a[], int n1, int b[], int n2, int c[]) {

      int i, j, k=0;

      for(i=0; i < n1; i++) {
          for(j=0; j < n2; j++) {
              if(a[i] == b[j]) {
                  c[k] = a[i];
                  k++;
              }
          }
```

```
        }

        return k;
}
```

21.

```
   i+1 ; j < n ; j++  //in the for loop header


        int temp = a[i];
        a[i] = a[smallest];
        a[smallest] = temp;
```