1. Fill the following table with good, medium, bad.

	Readability	Implementation efficiency	Execute efficiency
1GL			
2GL			
3GL			

2. Can machine language be run on different computers? Why?

3. Can Java be run on different computers? Why?

4. Draw the parsing tree for

$$f = 3 \times x + \frac{2 \times x - x^2}{x + 1}$$

5. What is the difference between *expression* and *statement*?

6. Finish the following table with expression, statement or both

3+7	
a = 2	
B = 3 + 7	
if (x == 3)	

7. Print the output for the following programs

1)

```
for (i = 1; i < 5; i = i + 2)
{
        print (i);
        print (i+1);
}
```

2)

```
i = 5;
while(i > 0)
{
        i = i - 3;
        print (i);
        i = i + 1;
        print (i+1);
}
```

3)

```
for (i = 1; i < 6; i++)
{
        if (i >= 3)
                print (i-1);
        else
                print(i);
}
```

8. Compute the Big O notation for
   1) $n^2 + 2logn$
   2) $3nlogn + n + 1$
   3) $2^n + n^2$
   4) $2n! + n^2$
   5) 190
   6) $n + 2logn$

9. What is the time complexity for searching an element from an array? Why?

10. What is the time complexity for searching an element from a **sorted** array? Why?