Tyler Bourgeois
Assignment 3 - Exercise 2

a. Focus Factor = 32 / 45 = 0.711111111
Previous man-days = 45 + 15 + 15(0.8) = 72 man days
72 man-days * 0.711111 FF = 51.2
Estimated velocity: 51.2 story points

b. Typically we use the focus factor of 0.7 for the first sprint of a brand new team.

c. An alternative approach to estimating story points is rolling a re-rolling a 20 sided die. It is common knowledge that if you use a random way of deciding something, while it's still rolling, or when the number shows up, you will know what you wanted the result to be. Thus, each engineer keeps rolling their dice until they get their desired results when trying to decide on story points for a problem. This approach is far worse, it doesn't account for breaks, the story points are limited to 1-20, and it is not private.

d. See attached

e.

```
public class BinaryTree(){
	Node root;

	public BinaryTree(){
		root = null;
	}

	public BinaryTree(int key){
		root = new Node(key);
	}

	public void add(int key){
		//Implementation of add function
	}

	public void remove(int key){
		//Implementation of remove function
	}
}

public class Node {
	int key;
	Node left, right;
```

```
	Node(int k){
		key = k;
		left = null;
		right = null;
	}

	public int getKey(){
		return this.key;
	}

	public void setKey(int n){
		this.key = n;
	}
}
```

f. See attached

g.

```
 public class LinkedList{
	Employee first;

	public void add(Employee e){
		//implementation of add method
	}

	public void remove(Employee e){
		//implementation of remove method
	}
}

public class Employee{

	Employee next;
	private String name;
	private int ssn;
	private double salary;

	Employee(String name, int ssn, double salary){
		this.name = name;
		this.ssn = ssn;
		this.salary = salary;
		next = null;
```

```
        }

        public String getName(){
                return this.name;
        }

        public void setName(String newName){
                name = newName;
        }

        public double getSalary(){
                return this.salary;
        }

        public void setSalary(double newSalary){
                salary = newSalary;
        }
}
```