Dev Patel
ICS 4U1
Mr. Cardoso
Wednesday, December 16, 2020

Homework - Section 6.2 (#1-2, 5ab, 6abc)

1 a) 4/5
b) -9/-7
c) 5/6
d) -9/-12
e) 13/20

2 a)
```
public void plusEquals(Fraction other){
     this.num = this.num * other.den + other.num *this.den;
     this.den = this.den * other.den
  }
```
b)
```
public Fraction plus(Fraction f){
     Fraction sum = new Fraction();
     sum.num = f.num * this.den + f.den * this.num;
     sum.den = f.den * this.den;
     return sum;
  }
```
c)
```
public void reduce(){
     int factor = 2;
     while(factor <= this.num && factor <= this.den){
          if(this.num%factor == 0 && this.den%factor == 0){
               this.num = this.num / factor;
               this.den = this.den / factor;
               factor = 2;
          }
          else{
               factor++;
          }
     }
  }
```

5 a)
```
public double area(){
     double area = Math.pi * Math.pow(this.r, 2);
     return area;
  }
```

b)
```
public Circle smaller(Circle other){
     if(this.area <= other.area){
          return this;
     }
     else{
          return other;
     }
  }
```

6 a) b) c)
```
public static void main(String[] args){
     // a)
     Circle c1 = new Circle();
     Circle c2 = new Circle();
     c1.x = 4;
     c1.y = -1;
     c1.r = 3;
     c2.x = 3;
     c2.y = -2;
     c2.r = 5;
     // b)
     System.out.println(c1.area());
     // c)
     Circle smallest;
     smallest = c1.smaller(c2);
     System.out.println("("+smallest.x+", "+smallest.y+")");
     System.out.println("radius: " + smallest.r);
}
```