

CS 1713 Exam 1 Solutions — Spring 2008

1) (12 points) a) 3 b) 2.6 c) 6.5 d) 16.25 e) 1 f) 12.5

2) (10 points)

```
cost = 1.10 + 0.02*pages + 1.00;
if (pages >=200)
    cost = cost + 1.0;
```

3) (9 points)

```
do
    frog.hop(1);
while (frog.getPosition() != 5);
```

4) (10 points)

```
a)
    for (int i=0; i < a.length; i++)
        System.out.print(a[i] + " ");
    System.out.println();

b)
    for (int i=0; i < a.length; i++)
        if (i == a.length - 1)
            System.out.println(a[i]);
        else
            System.out.print(a[i] + ", ");
```

5) (8 points)

```
public int getSmallestPosition(double[] array) {
    int pos = 0;
    if (array.length == 0)
        return -1;
    for (int i=1; i<array.length; i++)
        if (array[i] < array[pos])
            pos = i;
    return pos;
}
```

6) (10 points)

```
RationalNumber r1 = new RationalNumber(3,4);
RationalNumber r2 = new RationalNumber(1,6);
RationalNumber r3 = r1.add(r2);
```

7) (5 points)

```
public boolean isIn(String s, char c) {
    return s.indexOf(c) != -1;
}
```

8) (10 points)

```
int n;
n = 10*(s1.charAt(0) - '0') + s1.charAt(1) - '0' +
    10*(s2.charAt(0) - '0') + s2.charAt(1) - '0';
s3 = "" + n;
```

9) (12 points) a) 'v' b) 8 c) -1 d) 24 e) "amming is fun." f) "rogr"

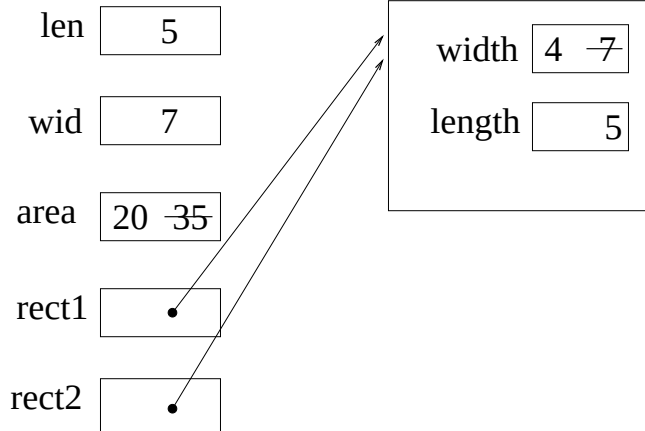
10) (4 points)

a

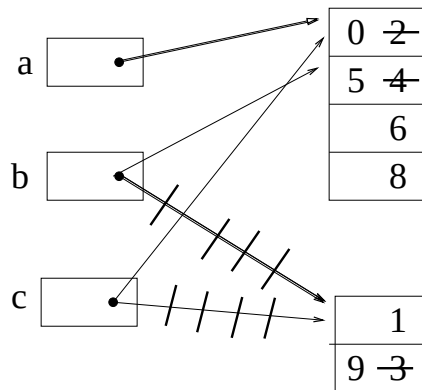
b

c

11) (6 points)



12) (6 points)



Alternate solutions to problem 8)

```
int n;
n = Integer.parseInt(s1) + Integer.parseInt(s2);
s3 = "" + n;
```

```
int n;
String digits = "0123456789";
n = 10*(digits.indexOf(s1.charAt(0)) + digits.indexOf(s1.charAt(1)) +
      10*(digits.indexOf(s2.charAt(0)) + digits.indexOf(s2.charAt(1)));
s3 = "" + n;
```