

CSE 250 Spring 2011
Homework 1
Due Date: Feb 14, Monday, by 2:05pm
Total Points: 24

- For the problems that ask you to trace a program segment, the easiest way is to write a short program and run the code.
- For the problems that ask you to write program segments, you only need to hand-in written code, (don't submit program on-line). But it's a good idea to test your program to make sure it works.

1. (3 points) Trace the following program segments:

```
double x = 3.1416;
double y = 2.71828;
double z;
double* px=&x;
double& ry=y;
*px = 6.28;
z = ry;
px = &z;
ry = *px;
cout << "x= " << x << endl;
cout << "z= " << z << endl;
cout << "y= " << y << endl;
cout << "ry= " << ry << endl;
cout << "*px= " << *px << endl;
```

What will be the output? (You may run the program to see the output. But make sure you understand why.)

2. (2 points) Consider the following program segment:

```
void swap (int a, int& b)
{ int temp = a;
  a=b;
  b=temp;
}

int main()
{ int x=-5, y=5;
  swap (x,y);
  cout << "x = " << x << " y = " << y << endl;
}
```

What will be the output? (You may run the program to see the output. But make sure you understand why.)

3. (2 points) Consider the following program segment:

```
int * p = new int();
int * q = new int();
(*q) = 4;
p = q;
(*p) += 5;
cout << *p << endl;
```

What value will be printed out?

4. (3 points) Page 16, Programming Problem 1.
5. (3 points) Page 29, Self-Check Problem 1.
6. (4 points) Page 32, Self-Check Problem 2.
7. (4 points) Page 38, Programming Problem 1.
8. (3 points) Page 44, Self-Check Problem 1.