

Eng 101 Winter '05 Sections 100 and 200.

Inlab #4

Inlabs are each worth about 0.5% of your grade. You are welcome to cooperate with other students, but you may not just copy from them. This is due at the start of your next lab section (Feb 1st or 2nd).

For this in-lab you will be completing a short program. In it there is a struct which represents a point in 2D space:

```
struct point
{
    double x;
    double y;
};
```

You are to write two functions. The first takes two points as arguments and computes the distance between them.

```
double dist2(point p1, point p2)
```

The second one takes three points as arguments. It uses dist2() to find which two points are closest and returns the distance between these two points.

```
double dist3(point p1, point p2, point p3)
```

We have provided bit of code for you to start with (see the website).

You are to turn in a printout of your code as well as a printout of the result of running the code (cut-and-paste from the screen into the editor). You are to staple these two printouts together and insure that your name, section number and unique name are visible at the top of the front sheet. You should leave the struct declaration and the main() unchanged.

The dist2() function is worth 85% of the points. The dist3() function is worth 15%. **Be sure your name, section number, and uname are at the top of the code (as a comment!)**

Hints:

- Recall that sqrt() is the square root function. It takes a double as an argument and returns a double. It will not give useful results if the value passed to it is negative.
- The absolute value function is abs(). It also takes a double for an argument and returns a double.

Good luck!