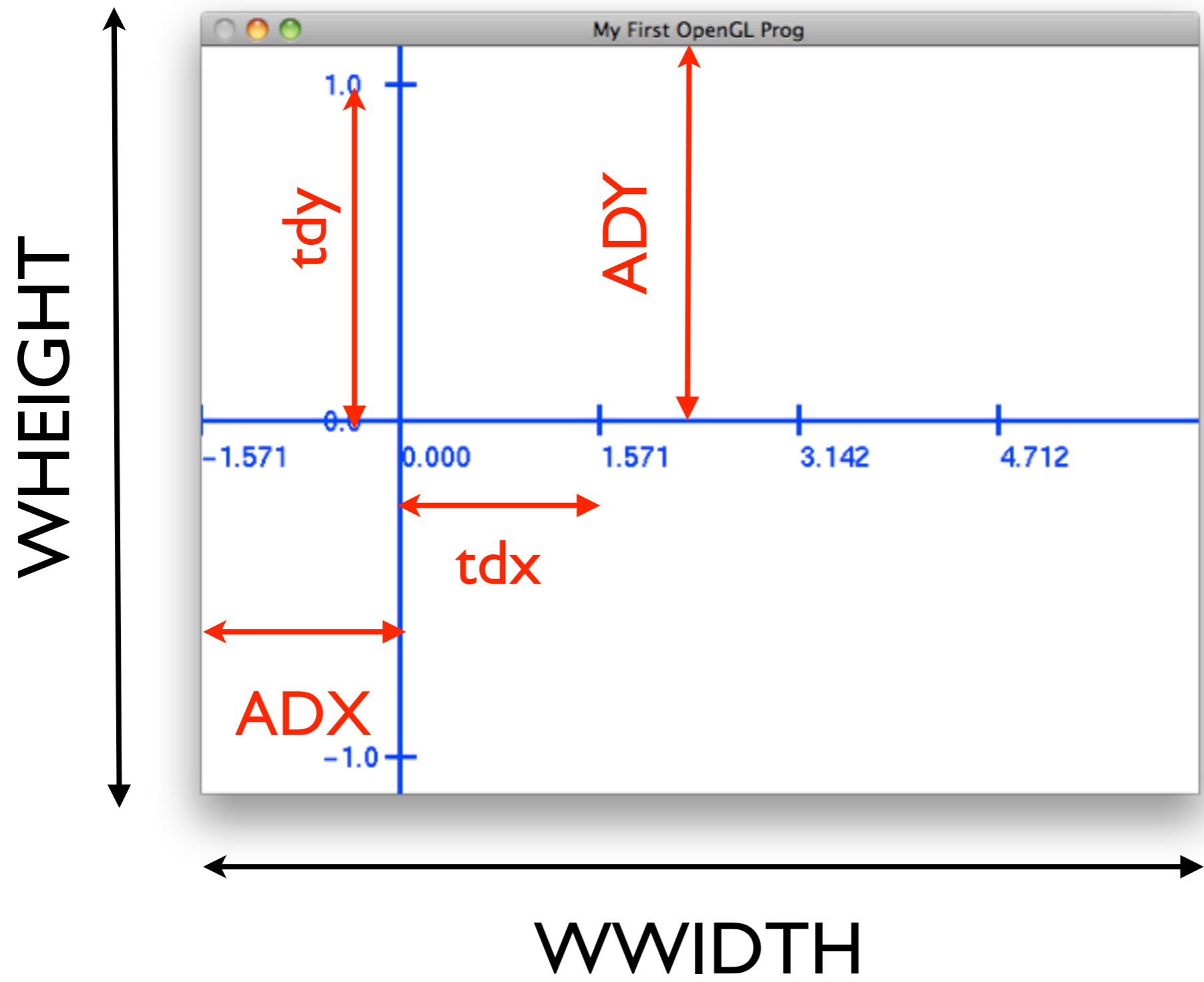


The First Graph

Design a window



Draw Text

- `glutBitmapCharacter(font name, character)`
- `glRasterPos2f(double x, double y)`

Text drawing

- Use Bitmap
- define a function drawString(char *s)

```
void drawString (char *s)
{
    unsigned int i;
    //glDisable(GL_TEXTURE_2D);
    for (i = 0; i < strlen (s); i++)
        glutBitmapCharacter (GLUT_BITMAP_HELVETICA_18, s[i]);
    //glEnable(GL_TEXTURE_2D);
}
```

Draw Axes

```
터미널 — bash — 80x24
}
void drawXAxes(double x1,double y1,double x2,double y2,double tdx)
{
    int i;
    double tx1,tx2,ty1,ty2,tdy;
    char label[100];

    drawLine(x1,y1,x2,y2,3.0);
    //draw ticks
    tdy=10.0;
    for(i=0;i<5;i++){
        tx2=tx1=(double)i*tdx;
        ty1=y1-tdy;
        ty2=y1+tdy;
        drawLine(tx1,ty1,tx2,ty2,3.0);
        glRasterPos2f(tx1,ty1-20.0);
        sprintf(label,"%0.3lf",0.5*PI*(double)(i-1));
        drawString(label);
    }
}
void drawYAxes(double x1,double y1,double x2,double y2,double tdy)
```

Keyboard input

```
void myKey(unsigned char,int,int);

int main (int argc,char * argv[]) {
    // insert code here...
    glutInit(&argc,argv); // initialize the glut toolkit
    glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB); // set display mode
    glutInitWindowSize(WWIDTH,WHEIGHT); // set the size of a window
    glutInitWindowPosition(100,150); // set the position of the window
    glutCreateWindow("My First OpenGL Prog"); // create the window
    glutDisplayFunc(myDisplay); //register redraw function
    glutKeyboardFunc(myKey);
    myInit();
    glutMainLoop(); // go into a perpetual loop
    return 0;
}

void myKey(unsigned char key,int x,int y)
{
    switch(key){
        case 27:
        case 'q':
        case 'Q':
            exit(0);
            break;
    }
}
```

Result

