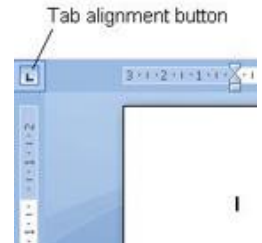


9007610: 4.01, 9.02, 08

1. See the following page see an example of what the work you need to do looks like. (The objects will not work in the example)
2. Type the centered title at exactly 3" from the edge of the paper using a center tab.
  - a. Activate the ruler bar
    - i. Click View.
    - ii. Check mark the ruler box.
  - b. Click on the tab alignment button until it becomes an upside down T. The L is left alignment, the upside down T is center alignment and the backwards L is right alignment.
  - c. Click on the three inch mark to put the upside down T there.
  - d. Click on the text and press tab, then type.
3. Type in all text as shown in the example.
4. Insert the objects
  - a. Add the date at 4  $\frac{3}{4}$  " from the edge of the paper using a left tab.
    - i. Click **Insert**.
    - ii. Click **Insert date**.
    - iii. Check the **Update Automatically** box, so the date changes each time the document is loaded.
  - b. Add a working calculator for programmers. It is easy to have trouble with embedded objects, but they are easy to delete. If something troubling happens, use undo or click the object and press Delete.
    - i. Click **Insert**,
    - ii. Click **Insert Object**.
    - iii. Click the **Create from File** tab. We are going to access an existing program rather than make a new one.
    - iv. Click **Browse**.
    - v. Go to **c:\windows\system32** and click on **Calc.exe**.
    - vi. Check mark **Display as Icon**.
    - vii. Click **Change Icon**.
    - viii. Browse to **c:\windows\system32** and click on **Calc.exe**.
    - ix. Click OK.
    - x. Format the object the way you would a picture.
    - xi. Save your work then test the object by double clicking on it.
  - c. Search for and find the other objects in the document example and apply the same procedure to make them embedded objects as well.
5. Insert the equations.
  - a. Click **Insert**,
  - b. Click  **$\pi$  Equation**.
  - c. Click the parts you need to make your equation.
6. **For an extra point or two**, Type up a page out of your math book. Pick a page with at least 5 equations and make links and objects to assist in finding solutions.



## Math for Programmers

Tuesday, February 22, 2011

The Distance formula

$$\text{Distance} = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$



calc.exe



notepad.exe

Energy in a collision

$$\text{Damage} = \text{Mass} \times \text{Velocity}^2$$

Position of an object orbiting around (x,y) at a distance of R

$$\text{Position}_x = x + \cos(\text{Angle in Radians}) \times R \quad \text{Position}_y = y + \sin(\text{Angle in Radians}) \times R$$

Scaling pixels to boxes of scale factor S starting at (Position<sub>x</sub>, Position<sub>y</sub>)

$$\sum_{i=1}^{\text{Max Pixels}} (\text{Position}_x + S(x_i - 1), \text{Position}_y + S(y_i - 1))$$



BULLETS.EXE

To

$$\sum_{i=1}^{\text{Max Pixels}} (\text{Position}_x + Sx_i, \text{Position}_y + Sy_i)$$

Linear acceleration of gravity, where g=gravity constant, and the radius of the gravity source is  $\infty$

$$\Delta Y = \Delta Y + g$$

Single point gravitation



BALL.EXE

$$g_x = \frac{g \frac{(x_1 - x_2)}{[(x_1 - x_2) + (y_1 - y_2)]^2}}{r_{\text{grav source}}^2}$$

$$g_y = \frac{g \frac{(y_1 - y_2)}{[(x_1 - x_2) + (y_1 - y_2)]^2}}{r_{\text{grav source}}^2}$$



Kepler.exe