Title
Subject
Class Number
First Last Name RedID: 0123456789

1: This begin problem command, I created. It simply creates the word 'Problem' followed by the number specified and then bolds it. It also makes a new page so the next problem will have its own page.

- "Double backslash" means new line

This is inline made mode - $x^2 + 2x + 1$, whereas this is display math mode:

$$x^2 + 2x + 1$$

This is how we align equations:

$$\begin{aligned} x^2 + 2x + 1 &= (x + 1)^2 \\ &= 0 \\ x &= -1 \end{aligned}$$

This is piecewise functions:

$$f(x) = \begin{cases} x^2 + 2x + 1 & x < 0 \\ (x + 1)^2 & x \geq 0 \end{cases}$$

This is how to include images and graphs:

This is how we created a bullet list:

(a) Item 1

(b) Item 2

This is how to create better looking parentheses:

$$(\frac{x^2}{2}) = \left(\frac{x^2}{2}\right)$$

This is how to make like spaces, and big spaces, and arrows:

$$x \quad y \qquad z \to xyz$$

This is how to make a big space followed by an arrow then another big space:

$$x * y * z \qquad \to \qquad xyz$$

This is limits, derivatives, integrals, series:

$$\lim_{x \to 0} \frac{1}{x} \qquad \to \qquad \frac{dy}{dx} = \frac{1}{x} \qquad \to \qquad \int_0^L f(x) = 0 \qquad \to \qquad e^x = 1 + x + \frac{x^2}{2} + \frac{x^3}{6} + \cdots + \frac{x^n}{n!}$$

This is bolding

This is bolding with inline math $x^2 + 2x + 1$

This is bolding with display math:

$$\boldsymbol{x^2 + 2x + 1}$$

This is how to include code:

```
def main(last_num):
  for i in range(1, last_num + 1):
    if i % 15 == 0:
      print(i, ': FizzBuzz')
    elif i % 3 == 0:
      print(i, ': Fizz')
    elif i % 5 == 0:
      print(i, ': Buzz')
    else:
      print(i)

def other(last_num):
  for i in range(1, last_num + 1):
    print(i, end=": ")
    if i % 3 == 0:
      print('Fizz', end="")
    if i % 5 == 0:
      print('Buzz', end="")
    print()

if __name__ == '__main__':
other(1000)

```