My LaTeX Portfolio

your name

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Well, three or four months run along, and it was well into the winter now. I had been to school most all the time and could spell and read and write just a little, and could say the multiplication table up to six times seven is thirty-five, and I don't reckon I could ever get any further than that if I was to live forever. I don't take no stock in mathematics, anyway.

–Huckleberry Finn

Quote attribution typeset with \begin{flushright} {\large --Huckleberry Finn} \end{flushright}

$$\int \ln(t)\,\mathrm{d}t = t\ln(t) - \int 1\,\mathrm{d}t \qquad \text{(Integration by Parts)}$$

Text can be accomplished inside math mode with \text{...}, but only if you load the package amsmath

$$\begin{bmatrix} 1 & 2 & 3 \\ 0 & -6 & 7 \end{bmatrix}^T = \begin{bmatrix} 1 & 0 \\ 2 & -6 \\ 3 & 7 \end{bmatrix}$$

Those are typeset with \begin{bmatrix}, and the 'T' exponent is just a superscript

$$
\begin{aligned}
a &= \sum_{n=0}^{\infty}(b_n - b_{n+1}) \\
&= \lim_{n\to\infty}(b_0 - b_1) + (b_1 - b_2) + \ldots + (b_{n-1} - b_k) \\
&= \lim_{n\to\infty}(b_0 - b_n) \qquad\qquad\qquad \text{(by Additive Cancellation)}
\end{aligned}
$$

For this, you will need the align* environment. Don't worry about centering until the end.

$$\frac{\sqrt{\frac{xy}{1}\left(\frac{1}{x}+\frac{1}{y}\right)}}{\frac{xy}{2}\frac{1}{xy}} = \frac{\sqrt{y+x}}{\frac{1}{2}} = 2\sqrt{x+y}$$

The difference quotient of a function f around a point a is defined as $\displaystyle\lim_{x\to a}\frac{f(x)-f(a)}{x-a}$. Often, in beginning differential calculus, students are required to calculate derivatives this way. This is generally agreed to be a huge pain.

The expression in this paragraph is typeset using \displaystyle.

Schiller/Whitney Similarity Theorem. *Let A and B be matrices. Then, A and B are similar.*

Proof. Well, if A and B are both matrices, then they are boxes with numbers in them. So, they are similar in that way. □

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You will need the package 'amsthm' and you will need to declare a new theorem with \newtheorem in the preamble.
```

modulo 4

×	0	1	2	3
0	0	0	0	0
1	0	1	2	3
2	0	2	0	2
3	0	3	2	1

```
This is the tabular environment, including a multicolumn line.

with Ada.Text_Io; use Ada.Text_Io;

procedure Gcd_Test is
   function Gcd (A, B : Integer) return Integer is
      M : Integer := A;
      N : Integer := B;
      T : Integer;
   begin
      while N /= 0 loop
         T := M;
         M := N;
         N := T mod N;
      end loop;
      return M;
   end Gcd;

begin
   Put_Line ("GCD␣of␣100,␣5␣is" & Integer'Image (Gcd (100, 5)));
   Put_Line ("GCD␣of␣5,␣100␣is" & Integer'Image (Gcd (5, 100)));
   Put_Line ("GCD␣of␣7,␣23␣is" & Integer'Image (Gcd (7, 23)));
end Gcd_Test;
```

```
This is the listings package, with the settings language=Ada, basicstyle=\ttfamily\small.
The code is available online at Rosetta Code.
```