## Week 2

Your Name Here
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## 1 Three Ways to Display an Equation

There are several ways to display an equation. They are equivalent- they are shown here so that you'll recognize them when they come up.

Double dollar sign: \$\$. . . \$\$

$$
x=\frac{-b \pm \sqrt{b^{2}-4 a c}}{2 a}
$$

Begin and end an equation environment (this numbers the equation):

$$
\begin{equation*}
x=\frac{-b \pm \sqrt{b^{2}-4 a c}}{2 a} \tag{1}
\end{equation*}
$$

Brackets: $$
. .
$$

$$
x=\frac{-b \pm \sqrt{b^{2}-4 a c}}{2 a}
$$

## 2 Figures: Create, Label and Reference

Have the figure file in the same folder as the tex file. For this example, download the figure clown.jpg from the class website.

### 2.1 Very Basic Example:

This is what happens with the graphics alone:



Figure 1: The photo of a famous clown.

We'll always incorporate a figure into a figure environment, that allows for captioning, labelling, referencing. Here is an example:

Back in the text, we can now reference the figure (see Figure 1).

### 2.1.1 This is a subsection under a subsection

Text for the subsubsection.

## 3 Label and reference an equation

Here's the equation:

$$
\begin{equation*}
x=\frac{-b \pm \sqrt{b^{2}-4 a c}}{2 a} \tag{2}
\end{equation*}
$$

In the text, if I now want to refer to the formula (see Equation 2).

### 3.1 Example: Label and reference a section

Text for the example. See the next command for the example- The label appears right after the section.

## 4 Formulas

In the text, now refer to back (see, for example, Section 4). This is a reference back to Section 2.1.

