Proofs with Uno
Proofs are written in Two-Column Form

- Deductive reasoning is used to prove a statement is correct.
- Step by step ideas must be laid out with postulates or proven theorems to prove a statement.
**Postulates and Theorems**

- *Postulates* are big ideas that are accepted as universal truths without proof.
- *Theorems* are ideas that can be proven using deductive logic (through syllogisms).
Format of Two-Column Proofs:

- Write the Given information Given, and what is to be proved.
- Construct a T.
- Statements that are true are placed in the first column.
- Reasons why the statement is true is placed in the second column.
Writing Uno Proofs

- The *postulates are the rules of Uno*.

- The first card is the *Given*.

- Syllogistic logic is used to list the order in which cards are played to finally play the card to be *Proved*.

- The logic in justified in 2-column format.
3 *Postulates* of Uno!

1. Play the same *color card*.
2. Play the same *number card*.
3. Play a WILD card to *change color*.
Sample

• Begin with

• List how to play these cards to

• ‘Prove’
# T-Chart

<table>
<thead>
<tr>
<th>Card played</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Blue 6</td>
<td>1. Given</td>
</tr>
<tr>
<td>2. Blue Skip</td>
<td>2. Same Color</td>
</tr>
<tr>
<td>3. Wild Draw 4</td>
<td>3. Change Color</td>
</tr>
<tr>
<td>4. Yellow 5</td>
<td>4. Same Color</td>
</tr>
<tr>
<td>5. Yellow 1</td>
<td>5. Same Color</td>
</tr>
<tr>
<td>6. Yellow Reverse</td>
<td>6. Same Color</td>
</tr>
</tbody>
</table>
Not every postulate has to be used.
T-Chart

Given: Red R

Card played

Reason

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Red Reverse</td>
<td>1. Given</td>
</tr>
<tr>
<td>2. Yellow Reverse</td>
<td>2. Same Symbol</td>
</tr>
<tr>
<td>3. Wild Draw 4</td>
<td>3. Change Color</td>
</tr>
<tr>
<td>4. Blue 9</td>
<td>4. Same Color</td>
</tr>
<tr>
<td>5. Red 9</td>
<td>5. Same Number</td>
</tr>
</tbody>
</table>

No need to use Blue
Given: 3 3

Prove: 2 2

Using: 2 2
T-Chart

Given: Yellow 1

Prove: Red 2

<table>
<thead>
<tr>
<th>Statements</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Yellow 1</td>
<td>1. Given</td>
</tr>
<tr>
<td>2. Yellow 0</td>
<td>2. Same Color</td>
</tr>
<tr>
<td>3. Red 0</td>
<td>3. Same Number</td>
</tr>
<tr>
<td>4. Red 2</td>
<td>4. Same Color</td>
</tr>
</tbody>
</table>
Given:  
Prove: 
Using:
T-Chart

Given: Blue Seven

Prove: Red Nine

Statements:
1. Blue 2
2. Blue Draw 2
3. Green Draw 2
4. Wild Card
5. Blue 1
6. Red 1

Reasons:
1. Given
2. Same Color
3. Same Symbol
4. Change Color
5. Same Color
6. Same Number
Given: 1

Prove: 3

Using: +2, 7, W, +2
## T-Chart

**Given:** Red 1  
**Prove:** Green 3

<table>
<thead>
<tr>
<th>Statements</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Red 1</td>
<td>1. Given</td>
</tr>
<tr>
<td>2. Red Draw 2</td>
<td>2. Same Color</td>
</tr>
<tr>
<td>3. Red Draw 2</td>
<td>3. Same Symbol</td>
</tr>
<tr>
<td>5. Green 7</td>
<td>5. Same Color</td>
</tr>
<tr>
<td>6. Green 3</td>
<td>6. Same Color</td>
</tr>
</tbody>
</table>
Given: +2

Prove: 

Using: 9

9

9

9

6

6

6

6
T-Chart

Given:  Green Draw 2  
Prove:  Blue Skip

Statements  (What Card to Play):

1.  Green Draw 2
2.  Green 9
3.  Blue 9
4.  Blue Skip

Reasons  (I can play this card because):

1.  Given
2.  Same Color
3.  Same Number
4.  Same Color

The Red 9 does not have to be used. (It is ok to do so, but would require an additional step.)
Given: \[\text{Card} 9\] \quad \text{Prove:} \quad \text{Card} 2\]

Using:
- \[\text{Card} 6\]
- \[\text{Card} 6\]
- \[\text{Card} 6\]
- \[\text{Wild Card}\]
- \[\text{Score +2}\]
- \[\text{Score +2}\]
# T-Chart

**Given:** Blue 9

**Prove:** Red 2

<table>
<thead>
<tr>
<th>Statements</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Blue 9</td>
<td>1. Given</td>
</tr>
<tr>
<td>2. Blue Draw 2</td>
<td>2. Same Color</td>
</tr>
<tr>
<td>3. Green Draw 2</td>
<td>3. Same Symbol</td>
</tr>
<tr>
<td>4. Green 6</td>
<td>4. Same Color</td>
</tr>
<tr>
<td>5. Red 6</td>
<td>5. Same Number</td>
</tr>
<tr>
<td>6. Red 2</td>
<td>6. Same Color</td>
</tr>
</tbody>
</table>

Not all of the cards were used.