# LaTeX 编辑参考

宫庆义
gongqingyi@qq.com

2015 年 8 月 9 日

# 目录

# 第 1 章　导论

## 1.1　概要

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

### 1.1.1　LaTeX 的基本命令

这里是楷书　　这里是宋体　　**这里是黑体**　　这里是仿宋

字号示例：

初号 一号 二号 三号 四号 五号 六号 七号 八号

北京[①]是中国的首都[②]. 如图1.1所示公式1.1是著名的格林公式，公式1.2是复变函数中的柯西公式. This is **emphasized** text.
*This is Italic font !*

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

$$\iint\limits_{D}(\frac{\partial Q}{\partial x}-\frac{\partial P}{\partial y})dxdy = \oint_{L} Pdx + Qdy \tag{1.1}$$

$$f(z_0) = \frac{1}{2\pi i}\oint_{C}\frac{f(z)}{z-z_0}dz \tag{1.2}$$

---

[①]直辖市
[②]一个国家的首府

图 1.1 *this is a pic of π*



图 1.2 *this is a dog*



图 1.3 *this is a butterfly*



(a) this is a bufferfly



(b) this is a beautiful flower

图 1.4 *Two Subfigures example*

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

**Theorem 1.1** (Law of Large Numbers)**.**

Let $(X_n)_{n\in\mathbb{N}}$ be an infinite sequence of i.i.d. variables with finite expected value. Then:

$$\frac{1}{n}\sum_{i=1}^{n} X_i \xrightarrow{\text{a.s.}} \mathbb{E}(X_1).$$

**Theorem 1.2** (Law of Large Numbers)**.**

Let $(X_n)_{n\in\mathbb{N}}$ be an infinite sequence of i.i.d. variables with finite expected value. Then:

$$\frac{1}{n}\sum_{i=1}^{n} X_i \xrightarrow{\text{a.s.}} \mathbb{E}(X_1).$$

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

### 1.1.2 LaTeX 的排版

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

|    | 文科 | 理科 | 工科 | 商科 | 总计 |
|----|------|------|------|------|------|
| 男 | 77   | 98   | 77   | 98   | 175  |
| 女 | 101  | 72   | 77   | 98   | 173  |
| 男 | 77   | 98   | 77   | 98   | 175  |
| 女 | 101  | 72   | 77   | 98   | 173  |
| 男 | 77   | 98   | 77   | 98   | 175  |
| 女 | 101  | 72   | 77   | 98   | 173  |
| 总计 | 178 | 170  | 178  | 170  | 348  |

表 1.1 问卷调查对象基本情况汇总表.

---

**Algorithm 1:** IntervalRestriction

---

**Function** *Recurs(X, U)***:**

    **Data**: $G = (X, U)$ such that $G^{tc}$ is an order.

    **Result**: $G' = (X, V)$ with $V \subseteq U$ such that $G'^{tc}$ is an interval order.

**1**      $V \longleftarrow U$

**2**      $S \longleftarrow \emptyset$

**3**      **for** $x \in X$ **do**

**4**          $NbSuccInS(x) \longleftarrow 0$

**5**          $NbPredInMin(x) \longleftarrow 0$

**6**          $NbPredNotInMin(x) \longleftarrow |ImPred(x)|$

**7**      **for** $x \in X$ **do**

**8**          **if** $NbPredInMin(x) = 0$ **and** $NbPredNotInMin(x) = 0$ **then**

**9**              $AppendToMin(x)$

**10**     **while** $S \neq \emptyset$ **do**

**11**        remove $x$ from the list of $T$ of maximal index

**12**        **while** $|S \cap ImSucc(x)| \neq |S|$ **do**

**13**           **for** $y \in S - ImSucc(x)$ **do**

**14**              { remove from $V$ all the arcs $zy$ : }

**15**              **for** $z \in ImPred(y) \cap Min$ **do**

**16**                 remove the arc $zy$ from $V$

**17**                 $NbSuccInS(z) \longleftarrow NbSuccInS(z) - 1$

**18**                 move $z$ in $T$ to the list preceding its present list

**19**                 {i.e. If $z \in T[k]$, move $z$ from $T[k]$ to $T[k-1]$}

**20**              $NbPredInMin(y) \longleftarrow 0$

**21**              $NbPredNotInMin(y) \longleftarrow 0$

**22**              $S \longleftarrow S - \{y\}$

**23**              $AppendToMin(y)$

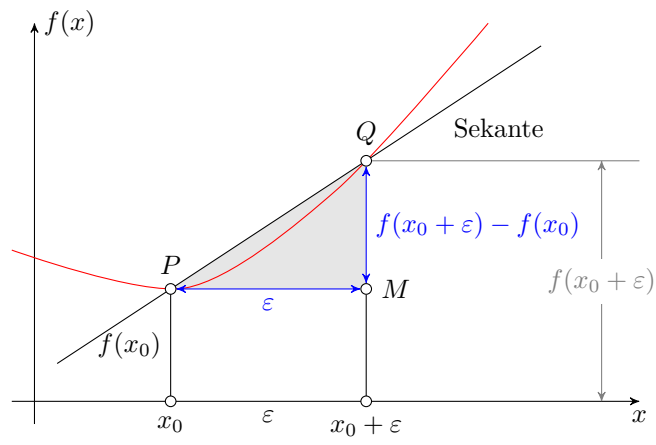**24**        $RemoveFromMin(x)$
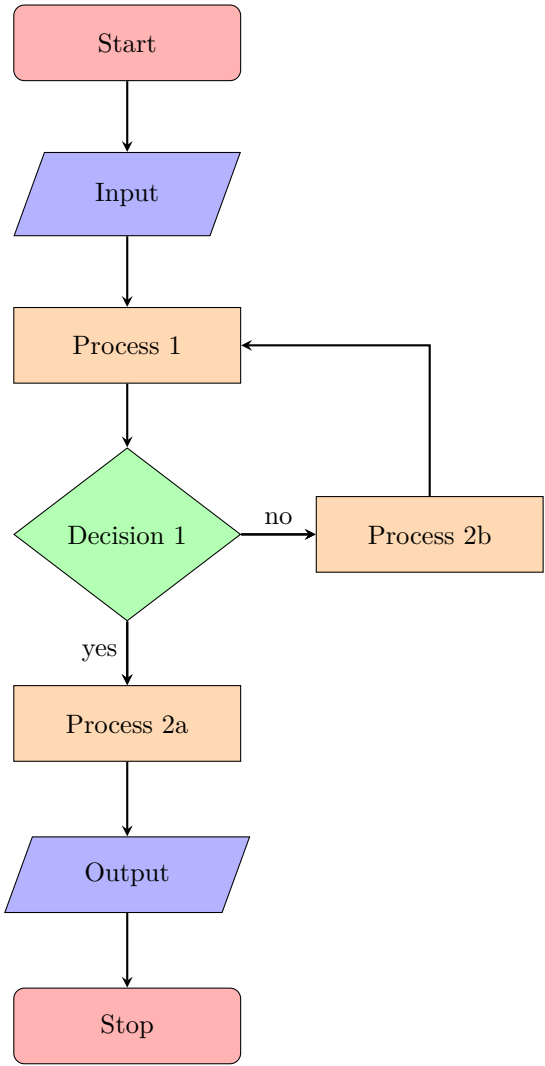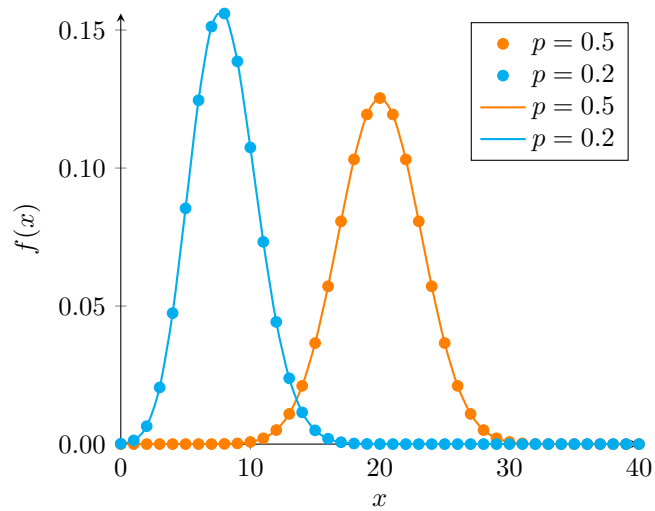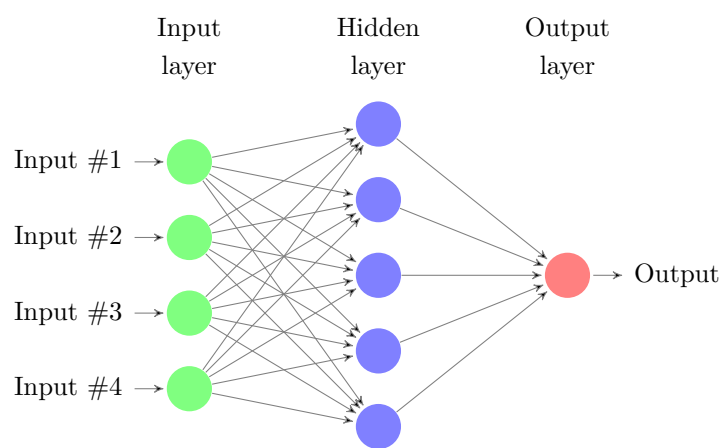
**25**     **return** true

图 1.5　函数的微分



图 1.6　函数的流程图示例

图 1.7 函数的图像



图 1.8 神经网络结构图

# 附录 A    数学公式参考

# 附录 B　习题答案