

HEC MONTRÉAL

Rédaction avec
`\title{LATEX}`

Principes de base

BENOIT HAMEL



Benoit Hamel
Technicien en documentation, soutien technique
Bibliothèque HEC Montréal

Rédaction avec `\title{LATEX}`

Première partie : Principes de base
Édition HEC Montréal, revue et augmentée (version française)

© 2016 Vincent Goulet pour la [version originale](#). La liste des sources qui ont servi à l'élaboration de cette formation se trouve à la fin du présent document.

© Cette création est mise à disposition selon le contrat [Attribution-Partage dans les mêmes conditions 4.0 International de Creative Commons](#). En vertu de ce contrat, vous êtes libre de :

- partager – reproduire, distribuer et communiquer l'oeuvre ;
- remixer – adapter l'oeuvre ;
- utiliser cette oeuvre à des fins commerciales.

Selon les conditions suivantes :

- Attribution – Vous devez créditer l'oeuvre, intégrer un lien vers le contrat et indiquer si des modifications ont été effectuées à l'oeuvre. Vous devez indiquer ces informations par tous les moyens possibles, mais vous ne pouvez suggérer que l'Offrant vous soutient ou soutient la façon dont vous avez utilisé son oeuvre.
- Partage dans les mêmes conditions – Dans le cas où vous modifiez, transformez ou créez à partir du matériel composant l'oeuvre originale, vous devez diffuser l'oeuvre modifiée dans les même conditions, c'est à dire avec le même contrat avec lequel l'oeuvre originale a été diffusée.

Sommaire de la formation

Présentation de $\text{T}_{\text{E}}\text{X}$ et $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$

Qu'est-ce que $\text{T}_{\text{E}}\text{X}$ et $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$?

Processus de création d'un document $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$

Principes de base

Structure d'un document

Rédaction

Bibliographie

Pour les nostalgiques de l'odeur de l'encre

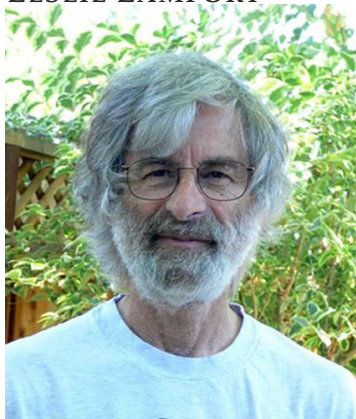
Pour les consciencieux de la forêt boréale

Présentation de T_EX et L^AT_EX



Qu'est-ce que \LaTeX ?

LESLIE LAMPORT



- Un ensemble de macro-commandes créées par Leslie Lamport pour faciliter l'utilisation de \TeX .
- Ne requiert aucune connaissance préalable de la typographie en général et de \TeX en particulier.
- Langage de balisage (*Markup Language*) typographique et logique pour indiquer la mise en forme du texte (pensez au HTML).
- Langage multiplateforme, identique d'un système d'exploitation à l'autre, et extensible par l'ajout de *packages*.
- « *author-level program* »



Processus de création d'un document L^AT_EX

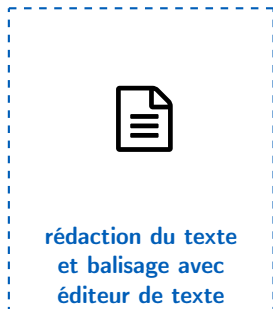
Rédiger avec une nouvelle perspective

- Vous rédigez votre document en texte brut et utilisez des commandes pour décrire **ce que votre texte représente** et **non pas ce à quoi il doit ressembler**.
- Vous vous concentrez sur votre **contenu**.
- Vous laissez \LaTeX faire son travail, c'est-à-dire s'occuper du **contenant**.

Processus de création d'un document \LaTeX



Processus de création d'un document \LaTeX



Processus de création d'un document \LaTeX



Processus de création d'un document \LaTeX



visualisation avec
une visionneuse
externe

Quelques choses simples à réaliser avec L^AT_EX...

... et pas nécessairement avec un logiciel de traitement de texte

- Page de titre
- Table des matières
- Numérotation des pages
- Figures et tableaux : disposition sur la page, numérotation, renvois
- Équations mathématiques : disposition, numérotation et renvois
- Citations et composition de la bibliographie
- Coupure de mots
- Document recto verso

Les outils dont vous aurez besoin

- Une distribution T_EX
 - T_EX Live (Windows et Unix/Linux)
 - MacT_EX, dérivée de T_EX Live (Mac OS)
 - MiK_TE_X (Windows, Mac OS et Unix/Linux)
- Un environnement de rédaction intégré
 - Une *flopée*...
 - La bibliothèque utilise et recommande T_EXStudio
- Un éditeur de ligne de commande

Principes de base





Structure d'un document



HEC MONTRÉAL

Structure d'un document

Un document \LaTeX est toujours composé de deux parties :

```
\documentclass[11pt , french]{ article}  
\usepackage[ utf8]{ inputenc}  
\usepackage[T1]{ fontenc}  
\usepackage{ babel}  
\usepackage[ autolanguage]{ numprint}  
  
\begin{document}  
  
  \section{Primo}  
  
  Ac class dis donec erat facilisis magna mattis  
  placerat potenti praesent primis sed tellus turpis  
  ut vehicula. Ad amet eleifend eros fames habitant  
  imperdiet integer laoreet leo magna magnis neque  
  netus senectus taciti torquent.  
  
  \section{Deuxio}  
  
  Cursus dui egestas eget eros et hac magna massa mollis  
  natoque penatibus sagittis sed tellus urna velit  
  vestibulum vitae vulputate.  
\end{document}
```

Structure d'un document

Un document \LaTeX est toujours composé de deux parties :

```
\documentclass[11pt, french]{article}  
\usepackage[utf8]{inputenc}  
\usepackage[T1]{fontenc}  
\usepackage{babel}  
\usepackage[autolanguage]{numprint}
```

← Préambule

```
\begin{document}
```

```
\section{Primo}
```

Ac class dis donec erat facilisis magna mattis
placerat potenti praesent primis sed tellus turpis
ut vehicula. Ad amet eleifend eros fames habitant
imperdiet integer laoreet leo magna magnis neque
netus senectus taciti torquent.

```
\section{Deuxio}
```

Cursus dui egestas eget eros et hac magna massa mollis
natoque penatibus sagittis sed tellus urna velit
vestibulum vitae vulputate.

```
\end{document}
```

Structure d'un document

Un document \LaTeX est toujours composé de deux parties :

```
\documentclass[11pt, french]{article}  
\usepackage[utf8]{inputenc}  
\usepackage[T1]{fontenc}  
\usepackage{babel}  
\usepackage[autolanguage]{numprint}
```

```
\begin{document}
```

```
\section{Primo}
```

Ac class dis donec erat facilisis magna mattis
placerat potenti praesent primis sed tellus turpis
ut vehicula. Ad amet eleifend eros fames habitant
imperdiet integer laoreet leo magna magnis neque
netus senectus taciti torquent.

```
\section{Deuxio}
```

Cursus dui egestas eget eros et hac magna massa mollis
natoque penatibus sagittis sed tellus urna velit
vestibulum vitae vulputate.

```
\end{document}
```

← Corps du document

Préambule

La classe de document

La **première commande** du préambule est normalement la déclaration de la classe.

```
\documentclass[options]{classe}
```

Préambule

La classe de document

La **première commande** du préambule est normalement la déclaration de la classe.

```
\documentclass[options]{classe}
```

PRINCIPALES CLASSES

- article, book, letter, report
- memoir, **hecthese**
- slides, beamer, **hecppt**

Préambule

La classe de document

La **première commande** du préambule est normalement la déclaration de la classe.

```
\documentclass[options]{classe}
```

PRINCIPALES CLASSES

- article, book, letter, report
- memoir, **hecthes**
- slides, beamer, **hecppt**

PRINCIPALES OPTIONS

- 10pt, 11pt, 12pt
- oneside, twoside
- openright, openany
- english, french

Préambule

Les *packages*

Les *packages* permettent de **modifier des commandes** ou d'**ajouter des fonctionnalités** au système.

Ils sont chargés dans le préambule avec la commande `\usepackage[options]{package}`.

```
\documentclass[options]{classe}  
  
\usepackage{package}  
\usepackage[options]{package}  
\usepackage{package1,package2,package3,...}
```

Commandes

- Débutent toujours par un \
- Formes générales :

```
\nomcommande[ args_optionnels]{ args_obligatoires}  
\nomcommande*[ args_optionnels]{ args_obligatoires}  
\nomcommande
```

- Arguments obligatoires entre { et }
- Arguments optionnels entre [et]
- Commande sans argument : le nom se termine par tout caractère qui n'est pas une lettre (y compris l'espace)
- Portée d'une commande limitée à la zone entre { et }.

Environnements

- Délimités par

```
\begin{environnement}  
...  
\end{environnement}
```

- Contenu de l'environnement traité différemment du reste du texte
- Changements s'appliquent uniquement à l'intérieur de l'environnement



the 1990s, the number of people in the United States who are 65 years of age or older has increased by 50 percent, and the number of people 75 years of age or older has increased by 100 percent. The number of people 85 years of age or older has increased by 200 percent. The number of people 95 years of age or older has increased by 400 percent. The number of people 100 years of age or older has increased by 1,000 percent. The number of people 105 years of age or older has increased by 2,000 percent. The number of people 110 years of age or older has increased by 4,000 percent. The number of people 115 years of age or older has increased by 8,000 percent. The number of people 120 years of age or older has increased by 16,000 percent. The number of people 125 years of age or older has increased by 32,000 percent. The number of people 130 years of age or older has increased by 64,000 percent. The number of people 135 years of age or older has increased by 128,000 percent. The number of people 140 years of age or older has increased by 256,000 percent. The number of people 145 years of age or older has increased by 512,000 percent. The number of people 150 years of age or older has increased by 1,024,000 percent. The number of people 155 years of age or older has increased by 2,048,000 percent. The number of people 160 years of age or older has increased by 4,096,000 percent. The number of people 165 years of age or older has increased by 8,192,000 percent. The number of people 170 years of age or older has increased by 16,384,000 percent. The number of people 175 years of age or older has increased by 32,768,000 percent. The number of people 180 years of age or older has increased by 65,536,000 percent. The number of people 185 years of age or older has increased by 131,072,000 percent. The number of people 190 years of age or older has increased by 262,144,000 percent. The number of people 195 years of age or older has increased by 524,288,000 percent. The number of people 200 years of age or older has increased by 1,048,576,000 percent. The number of people 205 years of age or older has increased by 2,097,152,000 percent. The number of people 210 years of age or older has increased by 4,194,304,000 percent. The number of people 215 years of age or older has increased by 8,388,608,000 percent. The number of people 220 years of age or older has increased by 16,777,216,000 percent. The number of people 225 years of age or older has increased by 33,554,432,000 percent. The number of people 230 years of age or older has increased by 67,108,864,000 percent. The number of people 235 years of age or older has increased by 134,217,728,000 percent. The number of people 240 years of age or older has increased by 268,435,456,000 percent. The number of people 245 years of age or older has increased by 536,870,912,000 percent. The number of people 250 years of age or older has increased by 1,073,741,824,000 percent. The number of people 255 years of age or older has increased by 2,147,483,648,000 percent. The number of people 260 years of age or older has increased by 4,294,967,296,000 percent. The number of people 265 years of age or older has increased by 8,589,934,592,000 percent. The number of people 270 years of age or older has increased by 17,179,869,184,000 percent. The number of people 275 years of age or older has increased by 34,359,738,368,000 percent. The number of people 280 years of age or older has increased by 68,719,476,736,000 percent. The number of people 285 years of age or older has increased by 137,438,953,472,000 percent. The number of people 290 years of age or older has increased by 274,877,906,944,000 percent. The number of people 295 years of age or older has increased by 549,755,813,888,000 percent. The number of people 300 years of age or older has increased by 1,099,511,627,776,000 percent. The number of people 305 years of age or older has increased by 2,199,023,255,552,000 percent. The number of people 310 years of age or older has increased by 4,398,046,511,104,000 percent. The number of people 315 years of age or older has increased by 8,796,093,022,208,000 percent. The number of people 320 years of age or older has increased by 17,592,186,044,416,000 percent. The number of people 325 years of age or older has increased by 35,184,372,088,832,000 percent. The number of people 330 years of age or older has increased by 70,368,744,177,664,000 percent. The number of people 335 years of age or older has increased by 140,737,488,355,328,000 percent. The number of people 340 years of age or older has increased by 281,474,976,710,656,000 percent. The number of people 345 years of age or older has increased by 562,949,953,421,312,000 percent. The number of people 350 years of age or older has increased by 1,125,899,906,842,624,000 percent. The number of people 355 years of age or older has increased by 2,251,799,813,685,248,000 percent. The number of people 360 years of age or older has increased by 4,503,599,627,370,496,000 percent. The number of people 365 years of age or older has increased by 9,007,199,254,740,992,000 percent. The number of people 370 years of age or older has increased by 18,014,398,509,481,984,000 percent. The number of people 375 years of age or older has increased by 36,028,797,018,963,968,000 percent. The number of people 380 years of age or older has increased by 72,057,594,037,927,936,000 percent. The number of people 385 years of age or older has increased by 144,115,188,075,855,872,000 percent. The number of people 390 years of age or older has increased by 288,230,376,151,711,744,000 percent. The number of people 395 years of age or older has increased by 576,460,752,303,423,488,000 percent. The number of people 400 years of age or older has increased by 1,152,921,504,606,846,976,000 percent. The number of people 405 years of age or older has increased by 2,305,843,009,213,693,952,000 percent. The number of people 410 years of age or older has increased by 4,611,686,018,427,387,904,000 percent. The number of people 415 years of age or older has increased by 9,223,372,036,854,775,808,000 percent. The number of people 420 years of age or older has increased by 18,446,744,073,709,551,616,000 percent. The number of people 425 years of age or older has increased by 36,893,488,147,419,103,232,000 percent. The number of people 430 years of age or older has increased by 73,786,976,294,838,206,464,000 percent. The number of people 435 years of age or older has increased by 147,573,952,589,676,412,928,000 percent. The number of people 440 years of age or older has increased by 295,147,905,179,352,825,856,000 percent. The number of people 445 years of age or older has increased by 590,295,810,358,705,651,712,000 percent. The number of people 450 years of age or older has increased by 1,180,591,620,717,411,303,424,000 percent. The number of people 455 years of age or older has increased by 2,361,183,241,434,822,606,848,000 percent. The number of people 460 years of age or older has increased by 4,722,366,482,869,645,213,696,000 percent. The number of people 465 years of age or older has increased by 9,444,732,965,739,290,427,392,000 percent. The number of people 470 years of age or older has increased by 18,889,465,931,478,580,854,784,000 percent. The number of people 475 years of age or older has increased by 37,778,931,862,957,161,709,568,000 percent. The number of people 480 years of age or older has increased by 75,557,863,725,914,323,419,136,000 percent. The number of people 485 years of age or older has increased by 151,115,727,451,828,646,838,272,000 percent. The number of people 490 years of age or older has increased by 302,231,454,903,657,293,676,544,000 percent. The number of people 495 years of age or older has increased by 604,462,909,807,314,587,353,088,000 percent. The number of people 500 years of age or older has increased by 1,208,925,819,614,629,174,706,176,000 percent. The number of people 505 years of age or older has increased by 2,417,851,639,229,258,349,412,352,000 percent. The number of people 510 years of age or older has increased by 4,835,703,278,458,516,698,824,704,000 percent. The number of people 515 years of age or older has increased by 9,671,406,556,917,033,397,649,408,000 percent. The number of people 520 years of age or older has increased by 19,342,813,113,834,066,795,298,816,000 percent. The number of people 525 years of age or older has increased by 38,685,626,227,668,133,590,597,632,000 percent. The number of people 530 years of age or older has increased by 77,371,252,455,336,267,181,195,264,000 percent. The number of people 535 years of age or older has increased by 154,742,504,910,672,534,362,390,528,000 percent. The number of people 540 years of age or older has increased by 309,485,009,821,345,068,724,781,056,000 percent. The number of people 545 years of age or older has increased by 618,970,019,642,690,137,449,562,112,000 percent. The number of people 550 years of age or older has increased by 1,237,940,039,285,380,274,899,124,224,000 percent. The number of people 555 years of age or older has increased by 2,475,880,078,570,760,549,798,248,448,000 percent. The number of people 560 years of age or older has increased by 4,951,760,157,141,521,099,596,496,896,000 percent. The number of people 565 years of age or older has increased by 9,903,520,314,283,042,199,193,993,792,000 percent. The number of people 570 years of age or older has increased by 19,807,040,628,566,084,398,387,



BENOIT HAMEL

Rédaction

- On rédige notre texte à l'intérieur de l'environnement document :

```
\begin{document}  
  Le contenu de votre travail est rédigé ici ...  
\end{document}
```

- On rédige notre document en texte brut et on utilise les commandes et les environnements pour structurer notre texte ;
- On rédige notre texte comme n'importe où ailleurs :
 - Les mots sont séparés par un ou plusieurs espaces ;
 - Les paragraphes sont séparés par une ou plusieurs lignes blanches ;
 - Tous les espaces blancs supplémentaires sont supprimés à la compilation.

Caractères spéciaux

Caractères réservés par T_EX

- # Numéro d'argument dans les commandes
- \$ Délimiteur du mode mathématique
- & Délimiteur de colonne dans les tableaux
- % Annonce le début d'un commentaire
- _ Indice (mathématiques)
- ^ Exposant (mathématiques)
- ~ Espace insécable
- { Ouvre une définition de commande ou d'environnement
- } Ferme une définition de commande ou d'environnement

Caractères spéciaux

Caractères réservés par T_EX

- # Numéro d'argument dans les commandes
- \$ Délimiteur du mode mathématique
- & Délimiteur de colonne dans les tableaux
- % Annonce le début d'un commentaire
- _ Indice (mathématiques)
- ^ Exposant (mathématiques)
- ~ Espace insécable
- { Ouvre une définition de commande ou d'environnement
- } Ferme une définition de commande ou d'environnement

POUR LES UTILISER :

`\#`

`\$`

`\&`

`\%`

`_`

`\textasciicircum`

`\textasciitilde`

`\{`

`\}`

Diacritiques et ligatures dans L^AT_EX

L^AT_EX ne supporte pas les diacritiques de manière native.

```
\{'E}crire \{'a} la fran\c{c}aise  
peut \^{e}tre vraiment p\{'e}nible  
si on ne conna\^{i}t pas le truc\ldots
```

Écrire à la française peut être vraiment pénible
si on ne connaît pas le truc...

On peut apprendre la [liste des commandes](#) par coeur... ou on peut ajouter des fonctionnalités à L^AT_EX pour le franciser.

L^AT_EX en français – préambule pour pdfL^AT_EX

Il faut charger un certain nombre de *packages* pour franciser L^AT_EX.

```
\documentclass[french]{hecthesse}  
\usepackage[utf8]{inputenc}  
\usepackage[T1]{fontenc}  
\usepackage{babel}  
\usepackage[autolanguage]{numprint}  
\usepackage{icomma}
```

L^AT_EX en français – préambule pour pdfL^AT_EX

Il faut charger un certain nombre de *packages* pour franciser L^AT_EX.

```
\documentclass[french]{hecthese}  
\usepackage[utf8]{inputenc}  
\usepackage[T1]{fontenc}  
\usepackage{babel}  
\usepackage[autolanguage]{numprint}  
\usepackage{icomma}
```

babel traduction des mots-clés prédéfinis, typographie française, coupure de mots, document multilingue

L^AT_EX en français – préambule pour pdfL^AT_EX

Il faut charger un certain nombre de *packages* pour franciser L^AT_EX.

```
\documentclass[french]{hecthesse}  
\usepackage[utf8]{inputenc}  
\usepackage[T1]{fontenc}  
\usepackage{babel}  
\usepackage[autolanguage]{numprint}  
\usepackage{icomma}
```

babel traduction des mots-clés prédéfinis, typographie française, coupure de mots, document multilingue

inputenc et fontenc lettres accentuées dans le code source

L^AT_EX en français – préambule pour pdfL^AT_EX

Il faut charger un certain nombre de *packages* pour franciser L^AT_EX.

```
\documentclass[french]{hecthesse}  
\usepackage[utf8]{inputenc}  
\usepackage[T1]{fontenc}  
\usepackage{babel}  
\usepackage[autolanguage]{numprint}  
\usepackage{icomma}
```

babel traduction des mots-clés prédéfinis, typographie française, coupure de mots, document multilingue

inputenc et fontenc lettres accentuées dans le code source

icomma virgule comme séparateur décimal

L^AT_EX en français – préambule pour pdfL^AT_EX

Il faut charger un certain nombre de *packages* pour franciser L^AT_EX.

```
\documentclass[french]{hecthesse}  
\usepackage[utf8]{inputenc}  
\usepackage[T1]{fontenc}  
\usepackage{babel}  
\usepackage[autolanguage]{numprint}  
\usepackage{icomma}
```

babel traduction des mots-clés prédéfinis, typographie française, coupure de mots, document multilingue

inputenc et fontenc lettres accentuées dans le code source

icomma virgule comme séparateur décimal

numprint espace comme séparateur de milliers

Caractères spéciaux

La suite...

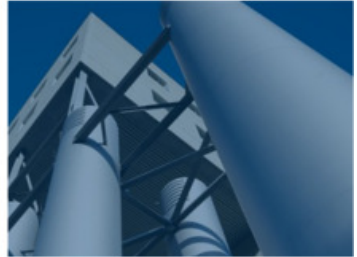
- Guillemets

- On ouvre les guillemets anglais simples avec un accent grave (') et les doubles avec deux accents graves ("). On les ferme avec un (') ou deux (") apostrophes, selon la situation.
- On utilise les chevrons (« et ») pour ouvrir et fermer les guillemets français. Il faut cependant inscrire la commande suivante à la fin de notre préambule :

```
\frenchbsetup{og=« ,fg=»}
```

- On inscrit les traits d'union avec un tiret (—), les traits demi-cadratin avec deux tirets (—) et les traits cadratin avec trois tirets (—).

Bibliographie



Bibliographie

Pour les nostalgiques de l'odeur de l'encre



Kopka, Helmut et Patrick W. Daly (2004).

Guide to \LaTeX , Fourth Edition,

Addison-Wesley,

ISBN 978-0-321-17385-0, 597 p.



the 1990s, the number of people in the United States who are 65 years of age and older has increased by 50 percent. The number of people aged 75 and older has increased by 100 percent. The number of people aged 85 and older has increased by 200 percent. The number of people aged 95 and older has increased by 400 percent. The number of people aged 100 and older has increased by 800 percent. The number of people aged 105 and older has increased by 1,600 percent. The number of people aged 110 and older has increased by 3,200 percent. The number of people aged 115 and older has increased by 6,400 percent. The number of people aged 120 and older has increased by 12,800 percent. The number of people aged 125 and older has increased by 25,600 percent. The number of people aged 130 and older has increased by 51,200 percent. The number of people aged 135 and older has increased by 102,400 percent. The number of people aged 140 and older has increased by 204,800 percent. The number of people aged 145 and older has increased by 409,600 percent. The number of people aged 150 and older has increased by 819,200 percent. The number of people aged 155 and older has increased by 1,638,400 percent. The number of people aged 160 and older has increased by 3,276,800 percent. The number of people aged 165 and older has increased by 6,553,600 percent. The number of people aged 170 and older has increased by 13,107,200 percent. The number of people aged 175 and older has increased by 26,214,400 percent. The number of people aged 180 and older has increased by 52,428,800 percent. The number of people aged 185 and older has increased by 104,857,600 percent. The number of people aged 190 and older has increased by 209,715,200 percent. The number of people aged 195 and older has increased by 419,430,400 percent. The number of people aged 200 and older has increased by 838,860,800 percent. The number of people aged 205 and older has increased by 1,677,721,600 percent. The number of people aged 210 and older has increased by 3,355,443,200 percent. The number of people aged 215 and older has increased by 6,710,886,400 percent. The number of people aged 220 and older has increased by 13,421,772,800 percent. The number of people aged 225 and older has increased by 26,843,545,600 percent. The number of people aged 230 and older has increased by 53,687,091,200 percent. The number of people aged 235 and older has increased by 107,374,182,400 percent. The number of people aged 240 and older has increased by 214,748,364,800 percent. The number of people aged 245 and older has increased by 429,496,729,600 percent. The number of people aged 250 and older has increased by 858,993,459,200 percent. The number of people aged 255 and older has increased by 1,717,986,918,400 percent. The number of people aged 260 and older has increased by 3,435,973,836,800 percent. The number of people aged 265 and older has increased by 6,871,947,673,600 percent. The number of people aged 270 and older has increased by 13,743,895,347,200 percent. The number of people aged 275 and older has increased by 27,487,790,694,400 percent. The number of people aged 280 and older has increased by 54,975,581,388,800 percent. The number of people aged 285 and older has increased by 109,951,162,777,600 percent. The number of people aged 290 and older has increased by 219,902,325,555,200 percent. The number of people aged 295 and older has increased by 439,804,651,110,400 percent. The number of people aged 300 and older has increased by 879,609,302,220,800 percent. The number of people aged 305 and older has increased by 1,759,218,604,441,600 percent. The number of people aged 310 and older has increased by 3,518,437,208,883,200 percent. The number of people aged 315 and older has increased by 7,036,874,417,766,400 percent. The number of people aged 320 and older has increased by 14,073,748,835,532,800 percent. The number of people aged 325 and older has increased by 28,147,497,671,065,600 percent. The number of people aged 330 and older has increased by 56,294,995,342,131,200 percent. The number of people aged 335 and older has increased by 112,589,990,684,262,400 percent. The number of people aged 340 and older has increased by 225,179,981,368,524,800 percent. The number of people aged 345 and older has increased by 450,359,962,737,049,600 percent. The number of people aged 350 and older has increased by 900,719,925,474,099,200 percent. The number of people aged 355 and older has increased by 1,801,439,850,948,198,400 percent. The number of people aged 360 and older has increased by 3,602,879,701,896,396,800 percent. The number of people aged 365 and older has increased by 7,205,759,403,792,793,600 percent. The number of people aged 370 and older has increased by 14,411,518,807,585,587,200 percent. The number of people aged 375 and older has increased by 28,823,037,615,171,174,400 percent. The number of people aged 380 and older has increased by 57,646,075,230,342,348,800 percent. The number of people aged 385 and older has increased by 115,292,150,460,684,697,600 percent. The number of people aged 390 and older has increased by 230,584,300,921,369,395,200 percent. The number of people aged 395 and older has increased by 461,168,601,842,738,790,400 percent. The number of people aged 400 and older has increased by 922,337,203,685,477,580,800 percent. The number of people aged 405 and older has increased by 1,844,674,407,370,955,161,600 percent. The number of people aged 410 and older has increased by 3,689,348,814,741,910,323,200 percent. The number of people aged 415 and older has increased by 7,378,697,629,483,820,646,400 percent. The number of people aged 420 and older has increased by 14,757,395,258,967,641,292,800 percent. The number of people aged 425 and older has increased by 29,514,790,517,935,282,585,600 percent. The number of people aged 430 and older has increased by 59,029,581,035,870,565,171,200 percent. The number of people aged 435 and older has increased by 118,059,162,071,741,130,342,400 percent. The number of people aged 440 and older has increased by 236,118,324,143,482,260,684,800 percent. The number of people aged 445 and older has increased by 472,236,648,286,964,521,369,600 percent. The number of people aged 450 and older has increased by 944,473,296,573,929,042,739,200 percent. The number of people aged 455 and older has increased by 1,888,946,593,147,858,085,478,400 percent. The number of people aged 460 and older has increased by 3,777,893,186,295,716,170,956,800 percent. The number of people aged 465 and older has increased by 7,555,786,372,591,432,341,913,600 percent. The number of people aged 470 and older has increased by 15,111,572,745,182,864,683,827,200 percent. The number of people aged 475 and older has increased by 30,223,145,490,365,729,367,654,400 percent. The number of people aged 480 and older has increased by 60,446,290,980,731,458,735,308,800 percent. The number of people aged 485 and older has increased by 120,892,581,961,462,917,470,617,600 percent. The number of people aged 490 and older has increased by 241,785,163,922,925,834,941,235,200 percent. The number of people aged 495 and older has increased by 483,570,327,845,851,669,882,470,400 percent. The number of people aged 500 and older has increased by 967,140,655,691,703,339,764,940,800 percent. The number of people aged 505 and older has increased by 1,934,281,311,383,406,679,529,881,600 percent. The number of people aged 510 and older has increased by 3,868,562,622,766,813,359,059,763,200 percent. The number of people aged 515 and older has increased by 7,737,125,245,533,626,718,119,526,400 percent. The number of people aged 520 and older has increased by 15,474,250,491,067,253,436,239,052,800 percent. The number of people aged 525 and older has increased by 30,948,500,982,134,506,872,478,105,600 percent. The number of people aged 530 and older has increased by 61,897,001,964,269,013,744,956,211,200 percent. The number of people aged 535 and older has increased by 123,794,003,928,538,027,489,912,422,400 percent. The number of people aged 540 and older has increased by 247,588,007,857,076,054,979,824,844,800 percent. The number of people aged 545 and older has increased by 495,176,015,714,152,109,959,649,689,600 percent. The number of people aged 550 and older has increased by 990,352,031,428,304,219,919,299,379,200 percent. The number of people aged 555 and older has increased by 1,980,704,062,856,608,439,838,598,758,400 percent. The number of people aged 560 and older has increased by 3,961,408,125,713,216,879,677,197,516,800 percent. The number of people aged 565 and older has increased by 7,922,816,251,426,433,759,354,395,033,600 percent. The number of people aged 570 and older has increased by 15,845,632,502,852,867,518,708,790,067,200 percent. The number of people aged 575 and older has increased by 31,691,265,005,705,735,037,417,580,134,400 percent. The number of people aged 580 and older has increased by 63,382,530,011,411,470,074,835,160,268,800 percent. The number of people aged 585 and older has increased by 126,765,060,022,822,940,149,670,320,537,600 percent. The number of people aged 590 and older has increased by 253,530,120

Bibliographie

Pour les consciencieux de la forêt boréale



Goulet, Vincent (2016).

formation-latex-ul – Introductory L^AT_EX course in French,
Comprehensive T_EX Archive Network,

Consulté le 22 février 2018 à <https://ctan.org/pkg/formation-latex-ul>



Lees-Miller, John D. (2018).

Free & Interactive Online Introduction to L^AT_EX,
Overleaf,

Consulté le 22 février 2018 à <https://www.overleaf.com/latex/learn/free-online-introduction-to-latex-part-1>



ShareL^AT_EX Documentation,

ShareL^AT_EX,

Consulté le 22 février à https://fr.sharelatex.com/learn/Main_Page