

What's a PhD? [1]

**Avertissement** [2] : People have often asked us what research we're doing. Despite our best efforts to be vague and barely comprehensible, our parents and friends invariably reply 'yes, yes,' while more or less sighing, more intrigued than ever. So we have resigned ourselves to describing not our work, but the life of a Ph.D student to the astonished masses. Going by the first reactions, it would appear that we have succeeded.

**The Supervisor**

To start a PhD, you need to have a boss. A boss is a very very clever man, who sets me a problem and who is going to help me solve it. That's my boss being photographed by Christian Mercatier-Bresson.



**The Research**

At first, it's so complicated that you can't understand anything.



THÉORÈME 1. - On a l'inégalité

$$\sum_{r \in G} \frac{|K_r|(|K_r| - 1)}{K^2} \log \left( \frac{|K_r| - 1}{K \epsilon \lambda_r} \right) + \frac{K - 1}{K^2} \sum_{r \in G} \sum_{s \in K_r} \|\log |a_s|\|$$

$$\leq \left(1 - \frac{1}{K}\right) \frac{2D}{K} \sum_{i=1}^K h(\alpha_i) + \frac{D}{K} \left(1 + \frac{|G|}{2D} + \log \frac{K}{2}\right)$$

You can spend hours looking and find anything. As like this, my dad and mum are really and when my mum it was a good :



make the kid (that  
do a PhD, my da  
his mouth  
speaking, he wai  
arms and he goes  
read the paper  
living room

### The Discovery

Sometimes, it's great, because I discover things that my boss asked me to. Of course, this can happen at any time, and my parents are not always delighted.

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They wonder if  
becoming complete  
my mum knows  
doesn't like her  
that.



I think it's rather normal to be happy. Besides, when my boss discovers a theorem, he's really proud and his friends (who are also really really clever people) are really happy with him. But my parents don't know that.



As well, sometimes, it goes badly because I make a mistake. And when I make a mistake, my boss does not put up with any messing about, none at all. 'Look me in the eyes, Nicholas,' he says to me, not in the least bit pleased. 'You call that work, perhaps?' he asks me. Well, that seems to be a question, but you should certainly not answer, because if you do, he gets all red and angry!

### The Seminars

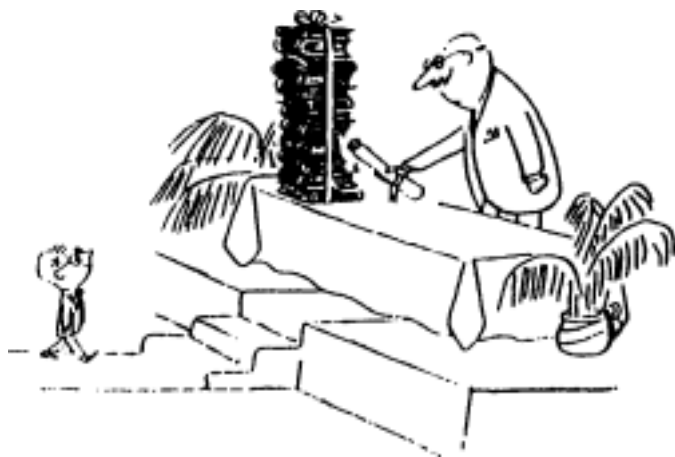
From time to time, a very, very important and really clever man (but even so, as my boss) comes to talk to us about really complicated things. This is called a seminar, and during a seminar, you can't mess about either.

When the man has finished talking, my boss asks him loads of really complicated questions, and he doesn't always know how to answer. And then, it's not fair, because he doesn't get told off!



### The Viva

When I've finished, there will be a very, very important man with loads of really, really complicated questions (there will even be other bosses, and there will be a very very important man who will say to my that's very good) and the paths of Research are gloriously open!

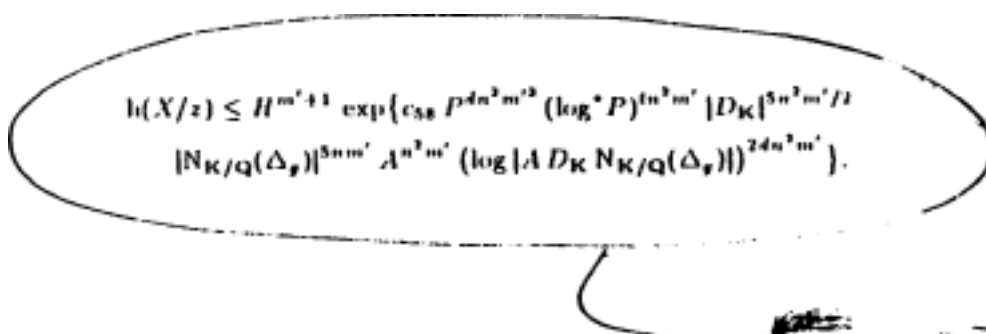


I'm the honour of my parents and the country, and all that nonsense. And there will be a great party with all my friends. Brilliant!

And when he reads all that in the paper, my dad will be really proud and my mum will be so happy that she'll give me a second helping of caramel custard, my favourite dessert. A Ph.D is really great after all!



### The Glory



$$h(X/z) \leq H^{m'+1} \exp\{c_{38} P^{4n^2 m'^2} (\log^* P)^{(n^2 m')} |D_K|^{5n^2 m'} / |N_{K/Q}(\Delta_f)|^{5n m'} A^{n^2 m'} (\log |A D_K N_{K/Q}(\Delta_f)|)^{24n^2 m'}\}.$$

What's more, my mum was impressed to know that I had done a Ph.D in maths. She said you've found hundreds of theorems. Even Mum smiles lots at me now. She thought that I was an unruly little boy.



## Nicholas does a PhD

Published: Tuesday, 23 May 2017 09:59

Hits: 3652

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[1] Told in the style of Sempé and Goscinny's popular children's books, from the point of view of a schoolboy called Nicholas.

[2] We would like to thank Arnaud Maes who was kind enough to let us reproduce 'Le petit Nicolas en thèse'. The official address is <http://petitnicolas.home.dyndns.org/nicolas.htm>