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## A Glorious Constant

Ze'ev Barel  
*Hendrix College*

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## A Glorious Constant

Ze'ev Barel  
Hendrix College  
Conway, AR 72032

*"In a riddle whose answer is chess, what is the only prohibited word?" I thought a moment and replied, "The word chess." —Jorge Luis Borges, "The Garden of Forking Paths"*

Without naming my burning passion,  
I shall sing a song of admiration,  
A glorious hymn to a constant,  
A basis for natural logarithms  
That most of us know from school.

\*\*\*

—But why?—you ask sarcastically—  
Such a crazy soliloquy  
To an ugly irrational quantity  
Which could not possibly function  
As a root of a good-looking polynomial?  
So I shall proclaim loudly  
Its validity in day-by-day affairs  
Along with its bright shining  
Throughout human history.  
In truth (in all probability),  
Pythagoras was ignorant of it,  
And it was also unknown  
To that miraculous Syracusan,  
To philosophizing scholars of Islam,  
To giants of Indian astronomy,  
To pupils of famous Confucius  
In kingdoms of classical China.  
This brainchild of a prolific Swiss author  
Was first shown to scholarly public  
In *Introductio in Analysin Infinitorum*,  
Occurring again and again  
In his many works in analysis  
And also in various manuscripts  
Of his illustrious rivals.

\*\*\*

Today, that fantastic constant  
Is vigorous, strong, and mighty,  
Occupying its rightful position  
In our faithful minds;  
Not only in abstract thinking  
Or among old and dusty  
Gloomy and dry formulas  
In old calculus books;  
It puts up a lot of labor

Within today's banking,  
Supporting that branch of industry,  
Its living spirit and soul.  
For, anybody in favor  
Of continuous compounding  
Of his growing holdings  
In a fat savings account  
Will always call for that constant,  
Writing its charming symbol  
(Fifth from a starting location  
On a traditional Roman list).

\*\*\*

—But how big is your constant?  
With an aim of approximation  
(A smart and studious school kid  
Could accomplish that task so fast),  
Put various factorials  
In bottom parts of fractions  
In which our familiar unity  
Is invariably on top,  
Sum up all such fractions,  
Going in that fashion  
As far as you may wish,  
This way you obtain quickly  
A fairly good accuracy  
In approaching your diamond goal.

\*\*\*

Now, would you discuss for an instant  
A truly profound topic  
(Which many find mildly amusing),  
A highly dramatic fact:  
Raising our gracious constant  
To what amounts to a product  
Of an imaginary unit  
And a circular constant  $\pi$ ,  
It would stand in stark opposition,  
To a multiplication unity,  
Displaying a minus sign.  
And that our Swiss advisor,  
With an utmost clarity,  
Saw in his brilliant opus  
During his Prussian sojourn.

\*\*\*

To this all-inspiring constant  
I sing a song of glory,  
That nobody could rival  
In annals of misty past;  
It knows no spatial limits,  
Will last for thousands of autumns,  
And nobody could inhibit  
Its triumph in any world.