This famous mathematical limerick by Leigh Mercer appeared in the February 1980 Word Ways:

A dozen, a gross, and a score
Plus three times the square root of four
Divided by seven
Plus five times eleven
Is nine squared and not a bit more.

Using the same rhyme scheme, I propose a new version:

The sum of $2k-4$
From one to thirteen plus a score,
Over eleven,
Plus eighteen times seven,
Equals six cubed and not a bit more.

Unless other rhyme schemes can be found, the possibilities for fully mathematical limericks seem limited. Instead of expressing equations involving specific numbers, they must be more general. Here are a couple of examples:

The sum of $3x$ and a trinity
As $x$ is approaching infinity
Is so terribly large
It could fill up a barge--
So drop Math and take up Divinity.

To find the square root of a third
Is clearly extremely absurd.
Every math student knows
The way that it goes:
You’ll always end up with a surd.

If you end up with an equation that can be expressed as a rhyming triplet in anapestic rhythm where the first two lines equal the third, you can simply sandwich two more lines in between to make it a limerick. The cosine of zero is conveniently one, so “Times the cosine / Of three squared minus nine” conveniently keeps the value the same while adding two lines:

The size of a triangle (right)
With eight as its base and its height,
Times the cosine
Of three squared minus nine,
Is the number of teeth in your bite.

Thus, the area of a right triangle with legs of length 8 is 32, the number of teeth in a normal bite.

It appears that there are many mathematical limericks yet to be discovered--with poetic license and a little bit of luck!