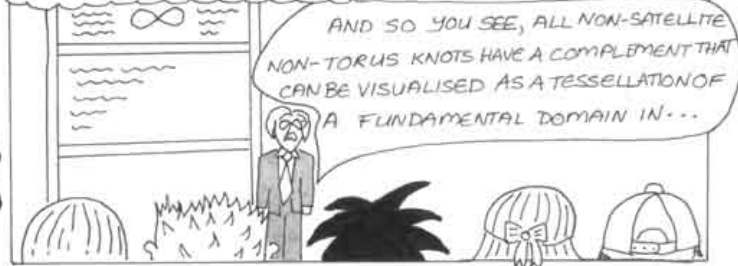


# KNOT MAN

ISSUE #3

By DANIEL MATHEWS & PRISCILLA BROWN

ON A SUNNY DAY IN PROFESSOR LICKORISH'S KNOT THEORY CLASS SITS OUR HERO, THEODORE J. KNOTT... FOR KNOT THEORY WAITS FOR NO MAN.



AND SO YOU SEE, ALL NON-SATELLITE NON-TORUS KNOTS HAVE A COMPLEMENT THAT CAN BE VISUALISED AS A TESSELLATION OF A FUNDAMENTAL DOMAIN IN...

PROFESSOR LICKORISH MAYBE A WORLD AUTHORITY ON THE TOPIC, BUT THIS DOESN'T MAKE THINGS ANY EASIER FOR OUR HERO.



mmm...LIQUORICE TWIST...

YES, HE ACTUALLY HAS A THEOREM ABOUT THAT.

THINGS ARE NEVER DULL FOR LONG IN THE KNOT THEORY CLASS... TRAINED AS THEY ARE TO DEAL WITH ANY TOPOLOGICAL EMERGENCY.



TIME FOR ANOTHER EMERGENCY COFFEE BREAK, PROFESSOR?

NO! THIS CAN ONLY MEAN ONE THING... WEAPONS OF MATHS DESTRUCTION!

AND SURE ENOUGH, ROAMING THE STREETS OF OUR FAIR CITY WAS A CRAZED PHYSICIST, ARMED WITH AN INCREDIBLE NEW WEAPON...



RUN!... IT'S A TESSELLATION RAY!

THE MATHEMATICIANS BROKE FOR COFFEE... AS THEY DO WHENEVER CONFRONTED WITH A DIFFICULT PROBLEM.



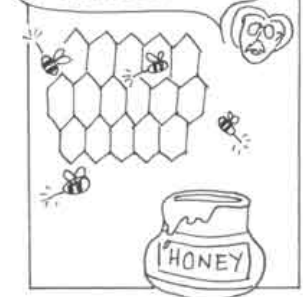
TESSELLATION RAY, PROFESSOR LICKORISH?

YES, THEY SAY THAT TESSELLATIVE FORCES RUN THROUGH THE UNIVERSE, TAKING SINGLE OBJECTS AND FORMING PATTERNS AROUND IT HUNDREDS OF TIMES!

YOU SEE, ORIGINALLY THERE WAS ONLY ONE CELL IN A HONEY COMB, AND ONLY FOUR ROADS IN THE WHOLE OF MELBOURNE!



... BUT NOW, THANKS TO THE TESSELLATIVE FORCES OF THE UNIVERSE, HONEY CAN BE PRODUCED IN LARGE QUANTITIES...



... AND MELBOURNE IS SUCH AN EASY CITY TO GET AROUND!



OF COURSE!

MEANWHILE, NO OPEN NEIGHBOURHOOD OF THE CITY WAS SAFE FROM THE ONSLAUGHT.



MY NAME IS DR UNUNURU! BEWARE, FOR I WILL TESSELLATE U!

IT MUST BE THAT EVIL PHYSICIST FROM LATRASHKIN, DR...ununuunu!

DR UNUNU... WHO?

IF HE'S NOT A DOCTOR THEN WHAT'S HIS TITLE...?

I KNEW THOSE PHYSICISTS COULDN'T BE TRUSTED WITH GROUP THEORY!

SOMEONE MUST HAVE HARNESSSED THESE TESSELLATIVE FORCES FOR THE POWER OF EVIL... IN A TESSELLATION GUN!



I'LL BET HE HAS A GREAT BATHROOM FLOOR, WHOEVER HE IS!

WITH THE CITY HELPLESS BEFORE IMPENDING DOOM, THEODORE J KNOTT TAKES CHARGE...

THIS SOUNDS LIKE A JOB FOR...

SO, WITH A MOUTHFUL OF HIGH ENERGY TOROIDAL DONUTS AND HIS TOPOLOGICAL UTILITY BELT, THEODORE J. KNOTT BECOMES...



**KNOT MAN!**



WAIT KNOT MAN! I'M COMING TOO!

BUT PROFESSOR, IT'S A **KNOTTY** SITUATION OUT THERE... ARE YOU SURE?

KEEP YOUR KNICKERS IN AN UNKNOT KNOT MAN! I HAVE A FEW THEOREMS UP MY SLEEVE, YOU KNOW...

WELL IT'S A **TOUGH ASSIGNMENT**. CAN I GET PARTIAL CREDIT DO YOU THINK?

AND SO THE INTREPID MATHEMATICAL ADVENTURERS SET OFF...

MATHS DEPT.




...DOWN SWANSTON STREET, OF COURSE, A SHORT STROLL FROM THE CITY.




**MORE ELEGANT** THAN THE FUNDAMENTAL THEOREM OF GALOIS THEORY...  $\Gamma = \text{Gal}(L/K)$

**MORE CAFFEINATED** THAN A CONVOY OF LONG-HAUL TRUCK DRIVERS.



**MORE POISED** THAN A STABLE 2-CYCLE...



**MORE INTELLIGENT** THAN TEN MILLION LEADERSHIP ADMINISTRATIONS OF THE U.S.A....

THE TWO EVENTUALLY ARRIVE IN THE CITY, BUT DR UNUNUNU IS NOWHERE TO BE SEEN...



WHAT CAN WE DO ABOUT ALL THIS TESSELLATION?!

ACTUALLY KNOT MAN, I'VE GOT SOMETHING MORE UNBELIEVABLE THAN THE BANACH-TARSKI THEOREM!



WITH MY NEW GROUP ACTION ORBIT QUOTIENTIFIER, WE CAN IDENTIFY ALL ORBITS UNDER THE ACTION OF THE WALLPAPER GROUP TO A SINGLE POINT!...

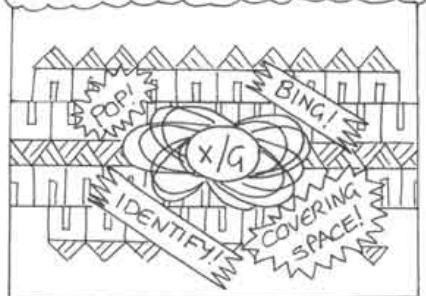
IT ALL SOUNDS A BIT TOO MUCH LIKE A GROUP THEORY LECTURE FOR KNOT MAN.

mmm...Z...Z...

NO KNOT MAN, IT'S NOT  $\mathbb{Z}_2$ , WALLPAPER GROUPS ARE MORE COMPLICATED!



SURE ENOUGH THE PROFESSOR SOON DISCOVERS THE CORRECT GROUP, AND THE GROUP ACTION ORBIT QUOTIENTIFIER DOES THE REST!



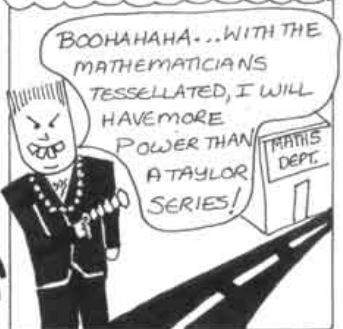
THE CITY IS RETURNED TO NORMAL... WELL ALMOST...



CAN'T FIX FEDERATION SQUARE OR RMIT... TOO APERIODIC

QUICK PROFESSOR! IT'S UNUNUNU-HE'S GETTING AWAY!

FASTER THAN A QUANTUM COMPUTER, DR UNUNUNU HEADS FOR THE MATHS DEPARTMENT.



BOOHAHAHA... WITH THE MATHEMATICIANS TESSELLATED, I WILL HAVE MORE POWER THAN A TAYLOR SERIES!

KNOTMAN AND THE PROFESSOR TAKE THE EMERGENCY TELEPORTER BACK TO THE UNIVERSITY... AND PEOPLE THINK THESE ARE JUST EMERGENCY TELEPHONES!



LOOK OUT!



TAKE THIS, PROF!

PROFESSOR LICKORISH PERFORMS HIS WORLD FAMOUS LICKORISH TWIST AND DODGES THE RAY...



YOU KNOW, I HAVE A THEOREM ABOUT THIS!

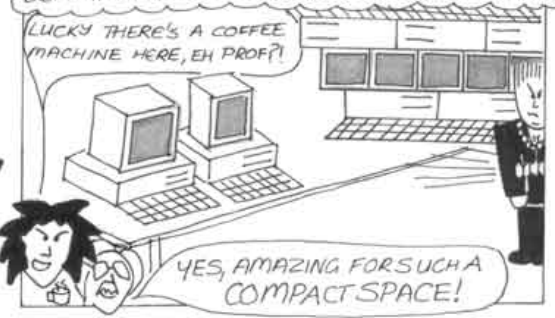
UNUNUNU'S BARRAGE IS RELENTLESS...



WE'VE GOT TO FIND OURSELVES SOME COVERING SPACE, PROF!

YES, HIT THE DECK TRANSFORMATION ON THE DOUBLE, KNOT MAN!

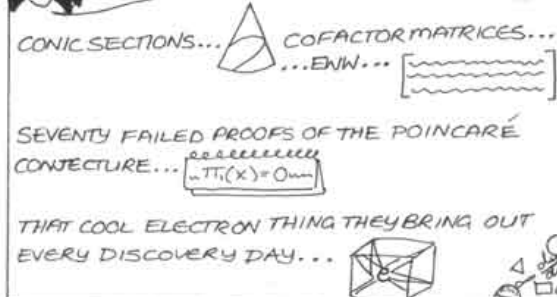
REFUGE IS FOUND IN A LITTLE KNOWN NOOK OF THE DEPARTMENT FILLED WITH MATHEMATICAL JUNK.



LUCKY THERE'S A COFFEE MACHINE HERE, EH PROF?!

YES, AMAZING FOR SUCH A COMPACT SPACE!

LET'S HAVE A LOOK THROUGH ALL THIS STUFF... ..HMM...

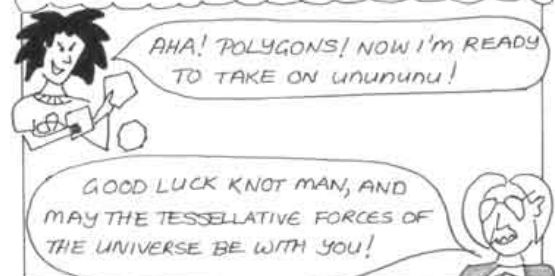


CONIC SECTIONS... COFACTOR MATRICES... ..ENW...

SEVENTY FAILED PROOFS OF THE POINCARÉ CONJECTURE...  $\pi_1(x) = 0$

THAT COOL ELECTRON THING THEY BRING OUT EVERY DISCOVERY DAY...

THINGS ARE LOOKING AS HOPELESS AS THE GOLDBACH CONJECTURE WHEN KNOT MAN STUMBLES ON SOMETHING...



AHA! POLYGONS! NOW I'M READY TO TAKE ON UNUNUNU!

GOOD LUCK KNOT MAN, AND MAY THE TESSELLATIVE FORCES OF THE UNIVERSE BE WITH YOU!

KNOT MAN FACES DR UNUNUNU IN THE CORRIDOR...

KNOT MAN, GIVE UP NOW... YOU HAVE YOUR BACK TO THE WALLPAPER!

NEVER, UNUNUNU!

THEN PREPARE TO BE TESSELLATED!

KNOT MAN HURLS A RECTANGLE TO DEFLECT THE BLAST...

I'LL WRECK your TANGLE, KNOT MAN!

THE RECTANGLE ABSORBS THE BLAST, FALLS TO THE FLOOR, AND CREATES A RATHER RESTHETICALLY PLEASING TILING.

90 MAY BE A FACTOR OF 360 UNUNUNU, BUT 108 ISN'T!

?!?

TESSELLATE THIS UNUNUNU!

?!?!?

UNUNUNU FIRES TO SAVE HIMSELF FROM THE INCOMING PENTAGON...

AARGH!

IN ENSUING GEOMETRIC MAHEM, UNUNUNU IS REDUCED...

... TO A HARMLESS QUOTIENT ORBIFOLD.

... AND THE PENTAGON IS DISTORTED BEYOND RECOGNITION AND LANDS IN THE OUTSIDE COURTYARD, TESSELLATED BADLY.

KNOT MAN, YOU'VE SAVED THE DAY AGAIN! I THOUGHT WE WERE AS LOST AS ERDÖS LOOKING FOR HIS OWN HOUSE!

KNOT AT ALL, PROF!

KNOT MAN, MASTER OF THE TESSELLATIVE FORCES OF THE UNIVERSE!

QED