

# Joy Morris



I am a professor at the University of Lethbridge. I work half-time at the university. This involves teaching two courses every Fall, supervising a graduate student, pursuing my research, and service work.

I did my undergraduate degree at Trent University in Peterborough, Ontario. I spent 7 years at SFU doing my graduate work; partly because I didn't have a Master's, but also because I was enjoying myself and getting active in student union work.

To a mathematician, I would say that my research is about automorphisms of Cayley graphs. That's very specialised and technical language; usually when I'm asked, I tell people that my research is about symmetries of networks. This can be any kind of network: roads, computers, communications, inter-personal... anything you can model as a bunch of points, with lines that connect some of those points. When a network is being designed, two important but competing factors are cost and reliability. If you connect every point to every other point, then it's very hard for any part of the network to become disconnected from the rest; but it's very expensive to create that many connections. Network designers try to balance these competing factors.

Outside of mathematics, I have a passion for social justice and devote significant volunteer time in particular to the education system, the issue of truth and reconciliation, and restorative justice. I am also a knitter, which keeps my hands occupied during many meetings. I enjoy travel and am delighted to have work that enables me to travel often to attend conferences and visit colleagues. I love to play games, and to read.

## Parent Math Help

For years, I've been hearing frustrations from parents around math. I realised one day that I could do something about this. As a math professor, I have the skills to help these parents. I have connections now with the local school district, so I approached the superintendent with the idea that I could run a drop-in program for parents who wanted to be able to help their kids with math homework, but needed some help. We agreed that they would host and I would run a drop-in program at one of the middle schools. It ran once a week for 8 weeks, for about 1 to 1.5 hours.