PMU 199 Aha! Mathematical Discovery and Creative Problem Solving

Sources for further information on mathematics and mathematicians...

Required text:
* E.B. Burger and M. Starbird. *The Heart of Mathematics. An invitation to effective thinking. 4th ed.* John Wiley and Sons, Hoboken, 2013.

Purchase or rent used and new copies at the UofT bookstore (or online booksellers). Make sure to get the 4th (rather than the 3rd) edition.

On mathematics:
E. Frenkel *Love and Math: The Heart of Hidden Reality.* Basic Books, NYC, 2013.

The Princeton Companion to Mathematics, edited by T. Gowers, J Barrow-Green and I. Leader. Princeton University Press, Princeton, 2008.

The Princeton Companion to Applied Mathematics, edited by N.J. Higham. Princeton University Press, Princeton, 2015.

T.W. Körner. *The Pleasures of Counting.* Cambridge Press, NYC, 1996.

G. Polya. *How to solve it.* Princeton University Press, Princeton, 1945.

W.W. Rouse Ball and H.S.M. Coxeter. *Mathematical Recreations and Essays.* Dover Publications, New York, 1987.

Ian Stewart. *From Here to Infinity.* (formerly titled *The Problems of Mathematics*). Oxford University Press, New York, 1992.

Cedric Villani's 2011 TED talk `www.youtube.com/watch?v=U3kKjGKp9rA`

On mathematicians:
Freeman J. Dyson. *Disturbing the Universe.* Harper & Row, NYC, 1979.

G.H. Hardy. *A Mathematician's Apology.* Cambridge Press, London, 1967.

W.P. Thurston. On proof and progress in mathematics. *Bull. Amer. Math. Soc.* **30** (1994) 161–177.