Welcome to MATH1111: Introduction to Calculus

- webpage Google [MATH1111]
- lecturer David Easdown
- tutorial time table (from Week 2)
  - Mon/Tues worksheets pre-class
  - Thurs/Fri tutorial exercise sheets

**Important ideas & useful facts**
provide a nutshell of that part
of the course

*Homework exercises more difficult*

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**Graph Diagram**

- Lecture
  - Passive
  - Mon/Tues worksheets
- Bridge
- Tutorial exercise sheets
- Online homeworks
**Extra resources:**

- "Just in Time" materials from Maths Learning Centre (Jackie will speak to us on Friday)

- Blackboard
  - Lecture recordings

- Q&A discussion forum

- Homework:
  - MyMathLab
  - WileyPLUS

- Web Appendices
  - from electronic version of text "Anton: Calculus"

- Library
  - Extensive catalogue, search engines, requesting books

  e.g. Anton Calculus Single Variable

  First Assignment: due Monday 11 April

  - Working through early homeworks will be beneficial & help prepare for concepts
Various models of learning

(Which do you prefer, and which works for you?)

Learning models:

Flow of information

- Rubber band model
  - At time

- Stretch model

Entropy normally increases!

Panic zone

Passive/active interface
3. Incident that can switch a person on or off with
   
   "mind reading"

\[
\frac{2x + 4}{2} - x = 2
\]

Google: first person to call on unknown x

\[
ax^2 + bx + c = 0 \implies x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}
\]

- quadratic formula
- cutting-edge technology in medieval mathematics
- leads to interesting explanations for polynomials of higher degree
- Ross Fitzgerald's 3 ranges incident

3x0 = 0 why?

↑ multiplication of real numbers

unrelated!!
4. Measuring class disposition towards maths

- Uses averaging

(An artform in statistical calculus).

Likert scale: students' disposition towards maths on Wed 2/3/2016:

\[\begin{array}{cccccc}
& 11 & 5 & 21 & 9 & 38 & 11 & 2 \\
\hline
& -3 & -2 & -1 & 0 & 1 & 2 & 3 \\
\end{array}\]

\text{weights:}
- hates
- dislikes
- dislikes neutral
- likes
- likes
- likes a lot
- a lot

\text{Likert categories:}
- a lot
- a lot
- neutral
- a lot
- likes
- dislikes
- dislikes

Weighted average:

\[
\frac{11(-3) + 5(-2) + 21(-1) + 9(0) + 38(1) + 11(2) + 2(3)}{11 + 5 + 21 + 9 + 38 + 11 + 2}
\]

\[\approx 0.0206\]

Extremely mild positive disposition towards maths.