

## **Mathematics Preparation for the MBA Program**

### **Objectives:**

It is students' responsibility to ensure that they understand the concepts listed below and the associated calculation procedures as they begin the MBA program. The math prep workshops are voluntary and intended for students with little background in maths, or a substantial gap since their last exposure, who wish to take them. The content is focused on basic mathematical concepts. The workshop is not intended to teach business concepts, although the mathematical concepts to be covered were chosen in light of business needs. The concepts are mathematical, but instructors are encouraged to use examples from their business fields to illustrate the mathematics.

### **Workshop Process:**

1. The list of concepts will be sent to students, and they are to self-diagnose, self-prepare, and volunteer to come to the workshop, as they deem appropriate.
2. The message to students will include guided links to on-line resources for those who want to use them, and information about the workshops.
3. The workshops are voluntary given the wide range of maths and EXCEL skills the students have.
4. Students are expected to ensure they understand the arithmetic concepts before coming to the workshops.
5. The workshops cover the algebra, statistics, and EXCEL concepts listed below.
6. The workshops are held on one day with three hours of algebra and statistics in the morning and three hours of EXCEL in the afternoon.
7. The workshops will be held on Saturday, September 25, 2021, and will be on-line.
8. Students can sign up for algebra, statistics, or EXCEL only, or some combination of the three.

### **Concepts to Be Covered**

#### **Arithmetic (Please know these before coming to the workshops)**

Percentages

Ratios

Proportions

Fractions - addition, subtraction, multiplication, division

Exponents - how to read negative exponents, fractional exponents

#### **Algebra**

Solving simultaneous equations two variables, generalizing the idea for more variables

Graphical visualization using two variables

Drawing a linear or straight line using two data points

Calculating the gradient/slope and Y-Intercept of linear curves

#### **Probability and Statistics**

Random events

Probability and odds

Central tendency measures

Dispersion measures

Descriptive and inferential statistics distinction

#### **Excel**

Concepts included in the Marquee Group workshop, "Excel 1: Core Data Analysis".

## **Math Link Resources**

### Open Access Textbooks

- Fundamentals of Business Mathematics (open access)
  - <https://ecampusontario.pressbooks.pub/busi1915/>
- Business Math: A Step-by-Step Handbook (open access)
  - <https://lyryx.com/subjects/business/business-mathematics/>

### Tests or Test Prep Resources

- Arithmetic Prep Guide – George Brown College
  - <https://www.georgebrown.ca/sites/default/files/2020-05/Preparation%20Guide%20for%20Accuplacer%20Next%20Generation%20Arithmetic%20-%20May%202020.pdf>
- Technical Math Test – Mohawk College
  - [https://www.mohawkcollege.ca/sites/default/files/accessible-pdf/testing-centre/Grade\\_12\\_Technical\\_Math\\_Sample\\_Questions.pdf](https://www.mohawkcollege.ca/sites/default/files/accessible-pdf/testing-centre/Grade_12_Technical_Math_Sample_Questions.pdf)

### Online Courses or Instructional Videos

- Math fundamentals instructional videos – Mohawk College
  - <https://web.mohawkcollege.ca/centre-teaching-learning/apps/video/mathminutes/>
- Learning Everyday Math – LinkedIn Learning
  - [https://www.linkedin.com/learning-login/share?forceAccount=false&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Flearning-everyday-math%3Ftrk%3Dshare\\_ent\\_url%26shareId%3DHjlueQioSsK7hHwObyycmw%253D%253D&account=56982905](https://www.linkedin.com/learning-login/share?forceAccount=false&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Flearning-everyday-math%3Ftrk%3Dshare_ent_url%26shareId%3DHjlueQioSsK7hHwObyycmw%253D%253D&account=56982905)
- Business Math – LinkedIn Learning
  - [https://www.linkedin.com/learning-login/share?forceAccount=false&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Fbusiness-math%3Ftrk%3Dshare\\_ent\\_url%26shareId%3DRvuEg6kzSOKEBQ73lOuwjQ%253D%253D&account=56982905](https://www.linkedin.com/learning-login/share?forceAccount=false&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Fbusiness-math%3Ftrk%3Dshare_ent_url%26shareId%3DRvuEg6kzSOKEBQ73lOuwjQ%253D%253D&account=56982905)
- Curated List of Khan Academy Pre-MBA Videos:
  - <https://www.graduatetutor.com/economics-tutoring/pre-mba-math-boot-camp/#Pre%20MBA%20Algebra%20Videos>