Foundations Math M020 - ALEKS
Fujairah Colleges
Semester 1, 2013-14

STUDENT GUIDE

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Introduction:

Math M020 is a one-semester course. The full course content shall be delivered and made accessible to you online through the Aleks website (http://www.aleks.com/). It will be done thru learning by doing method, that means you will do most the work on your own – under your teacher’s close supervision. Your teacher will be there and ready to help you succeed in every step of the way.

The Math M020-Aleks course is divided into 10 chapters, composed of 384 topics. Additionally, there is also a Quick Table section which will help you master the mental arithmetic. Quick Table aims to sharpen your skills in four basic operations (addition, subtraction, multiplication & division) without the use of a calculator.

Moreover, you will be required a college-based coursework, which may be in the form of project which you need to submit on your teacher’s designated date.

Here is the list of all the chapters and topics:

Whole Numbers (70 topics)
- Expanded Form and Numeral Translation
- Addition and Subtraction
- Multiplication and Division
- Ordering, Rounding, and Estimating
- Exponents and Order of Operations
- Properties of Operations
- Prime Numbers, Factors, and Multiples

Fractions (36 topics)
- Equivalent Fractions
- Plotting and Ordering Fractions
- Addition and Subtraction
- Multiplication and Division
- Mixed Numbers
Decimals, Proportions, and Percents (53 topics)
- Place Value, Rounding, and Ordering
- Converting Between Fractions and Decimals
- Addition and Subtraction
- Multiplication and Division
- Ratios, Rates, and Proportions
- Percents

Measurement (10 topics)
- Metric Units of Measurement
- Time and Temperature

Geometry (65 topics)
- Lines and Angles
- Triangles
- Polygons and Quadrilaterals
- Circles
- Volume and Surface Area
- Similarity

Data Analysis and Statistics (23 topics)
- Tables and Graphs of Data
- Mean, Median, and Mode
- Probability

Real Numbers (38 topics)
- Real Numbers
- Operations with Real Numbers
- Scientific Notation
- Square Roots

Algebraic Expressions and Equations (46 topics)
- Algebraic Expressions
- Additive and Multiplicative Properties of Equality
- Solving Equations with Multiple Steps
- Applications of Linear Equations
- Inequalities

Graphs of Linear Equations (16 topics)
- Ordered Pairs and Equations in Two Variables
- Graphing
Exponents and Polynomials (27 topics)
- Properties of Exponents
- Polynomials

Daily Requisites:
These are the course requirements that you need to accomplish in order to ensure your success in the course.
1) Come to class on time. Attendance will be marked as usual.
2) Log in to your account and work on the Aleks topics suggested for you to study.
3) Do the practice on the Quick Table every day to take advantage of the daily limited time allowed.
4) Keep track of your daily progress by looking at the target chart given to you by your teacher after the initial assessment.
5) Ask your teacher for help. Your teacher will help you regarding the topics you are studying, and answer your questions related to your progress.
6) If you need more time to catch up with your target, you can work at home or anywhere during your free time. *(You need an internet connection to do this.)*
7) Answer the quizzes and assessments on your own. Asking help from others will affect your learning and your score when you take the progress assessments with your teacher.
8) You must have the following items with you every day.
   - iPad *(fully charged)*
   - Scientific calculator *(natural display, e.g. CASIO fx-100MS, CASIO fx-8M)*
   - Other materials as may be required by your teacher

Learning Strategies:
The first 2 weeks of the semester will run as normal classroom interaction. The initial topics of the course will be covered to give you a clear overview. Practice exercises will be accessible through the [http://fjw.hct.ac.ae/student_info/foundations/html/aleks.html](http://fjw.hct.ac.ae/student_info/foundations/html/aleks.html) website. Video explanations are also available in this site, in addition to online links that you do for further practice.
Beginning on the third week, all the topics and exercises will be delivered to you online through [http://www.aleks.com/](http://www.aleks.com/). Comprehensive assessments and QT quizzes will be done in the classroom under exam environment with your teacher invigilating. Meanwhile you can do other assessments assigned periodically by the Aleks system anytime, anywhere even at home.

Here are the tasks that you have to do in class:

<table>
<thead>
<tr>
<th>Initial Assessment</th>
<th>Comprehensive Assessment</th>
<th>Individual instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>QT quizzes</td>
<td></td>
<td>Small group instruction</td>
</tr>
</tbody>
</table>

While these are other things that you can do on your own time outside the college.
- Practice topics on the Aleks website
- Quick Table exercises
• Progress assessments assigned automatically by the Aleks website
• Project

The Aleks Website:

The website is accessible thru this website: http://www.aleks.com/. You will need to register using an account code which will be given to you by your teacher. You will create your username and password which you need to remember. You will use your username and password every time you log in to the website. Make sure you don’t give out your username and password to anyone for your security.

Grading System:

Your overall performance on your online work will determine your final mark in Math M020. The percentage number of topics you will learn out of 384 will be translated to HCT grade thru a conversion table and will correspond to 70% of your final mark. Additionally, your Quick Table average will correspond to the remaining 15%, while Project (College-based coursework) will be 15%.

Assessment Plan:

A. Assessment Plan
• Students’ final score on PIE will be based on comprehensive test.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Week/Day</th>
<th>Approx. Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Assessment</td>
<td>w3, d1</td>
<td>Sept 22</td>
</tr>
<tr>
<td>QT Initial Assessment (+, -, x, ÷)</td>
<td>w4, d4-d5</td>
<td>Oct 2-3</td>
</tr>
<tr>
<td>Progress Assessment 1</td>
<td>w5, d5</td>
<td>Oct 10</td>
</tr>
<tr>
<td>Progress Assessment 2</td>
<td>w7, d5</td>
<td>Oct 24</td>
</tr>
<tr>
<td>QT Assessment 1 (+, -, x, ÷)</td>
<td>w8, d2-d3-d4-d5</td>
<td>Oct 28-31</td>
</tr>
<tr>
<td>Doing the Project</td>
<td>Week 9 - 12</td>
<td>Nov 3 - 28</td>
</tr>
<tr>
<td>Comprehensive Assessment 2</td>
<td>W9, d5</td>
<td>Nov 7</td>
</tr>
<tr>
<td>QT Assessment 2 (+, -, x, ÷)</td>
<td>w10, d2-d3-d4-d5</td>
<td>Nov 11-14</td>
</tr>
<tr>
<td>Comprehensive Assessment 2</td>
<td>w11, d1</td>
<td>Nov 17</td>
</tr>
<tr>
<td>QT Assessment 3 (+, -, x, ÷)</td>
<td>w14, d1-d2-d3-d4</td>
<td>Dec 8-11</td>
</tr>
<tr>
<td>Comprehensive Assessment 3</td>
<td>W14, d5</td>
<td>Dec 12</td>
</tr>
<tr>
<td>Comprehensive Assessment 4</td>
<td>w16, d5</td>
<td>Jan 16</td>
</tr>
</tbody>
</table>
B. Exit Points

The table below shows the marks that students need to achieve in order to successfully pass and exit the course.

<table>
<thead>
<tr>
<th>EXIT</th>
<th>No. of Topics (PIE only)</th>
<th>HCT Equivalent</th>
<th>Quick Table 15%</th>
<th>Project 15%</th>
<th>HCT Total Grade 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anytime</td>
<td>346 (90%)</td>
<td>90%</td>
<td>Not required (same as PIE score)</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>Week 11-12</td>
<td>326 (85%)</td>
<td>80%</td>
<td>Whatever is expected at this point</td>
<td>(56 + QT + Pr) %</td>
<td></td>
</tr>
<tr>
<td>End of Semester</td>
<td>288 (70%) minimum score</td>
<td>60%</td>
<td>A must (at least 60%)</td>
<td>60% (min.)</td>
<td></td>
</tr>
</tbody>
</table>

**Attendance:**

- عقوبة الغش هي الفصل النهائي من كليات التقنية العليا
- Read the college HCT policies and rules about absences and late arrivals – these rules will be applied.
- Read the Guidelines and Policies in your student planner.

**Academic Honesty:**

- Make sure you know the HCT Academic Policies - they will be applied.
- Cheating is an attempt to gain marks dishonestly, including trying to cheat. Helping others to gain marks dishonestly is also cheating.
- Giving your Aleks account and password to others, and/or asking others to work on your Aleks account is considered cheating.
- Read the cheating section of the Student Planner, especially the definition of Cheating as well as the practical examples.