

ALEKS Math
School Year 2011 - 2012
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Aquin Catholic Elementary School - Computer Lab

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Course Overview:

Assessment and LEarning in Knowledge Spaces is a web-based, artificially intelligent assessment and learning system. ALEKS uses adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know in a course. ALEKS then instructs the student on the topics s/he is most ready to learn. ALEKS is fully aligned with Illinois and National Council of Teachers of Mathematics (NCTM) standards.

Format:

This course is entirely web-based, giving the students the possibility to work on their math skills 24 hours a day, seven days a week!

Initially, the students will be given a comprehensive assessment to place them within their course. The students will then enter into "Learn" mode for the remainder of the week. At the beginning of each week, each student will take an assessment covering the concepts they learned the previous week.

As a student in ALEKS works completely at his/her own pace, it is important that there is an environment outside of class (e.g., at home) which provides a discipline and routine for the student to regularly use ALEKS. This course is an opportunity for students to develop self-discipline and discovery habits.

There is no assigned homework in this class. However, it is **expected** that each student will spend additional time, outside of class, working on ALEKS (see Grading Scale and Weighting).

Our Assumptions

"It takes no talent to try". The students have already heard Mr. Chang say this many times. As far as in-class rules and behavior are concerned, we only expect two things: **that the students TRY...that they put forth the best effort that they have, and; that the students are respectful of everyone** in the classroom. We do not tolerate anything less than these two simple expectations.

Class Procedures

Because the students will be largely working independently, it is expected that they will come to class, log on to their computer and begin their course work. Students can raise their hand for teacher assistance, but they must first attempt to learn the concept by using the ALEKS “Explain” button and other internet resources available.

Many students have found that taking notes while learning concepts is an effective way to retain the material. In addition, the weekly assessments are “open book”, so these notes may be used.

Grading Scale and Weighting

Students using ALEKS will be expected to work hard, learn and accomplish, and retain what they learn.

Students will receive three grades per week. These are designed to balance out working hard with effective learning. In other words, the students will be expected to use ALEKS a number of hours per week. A grade will be given based on **how many hours** per week the student uses ALEKS. To be a counter balance to this grade, the students will also receive one grade based on how many **math concepts they learn per hour** and one based on how they **progress in a certain week** and **absolute progression toward completion of their course**.

At the completion of the school year, or when a course is completed, the student will be given a comprehensive assessment covering all materials in the course to assess the student's retention of the concepts.

Overall Grade Weights

| Category | Weight |
|--|--------|
| Work Hard hours per week | 25.00% |
| Work Effectively concepts per hour | 20.00% |
| Make Weekly Progress relative progression | 25.00% |
| Make Absolute Progress to Complete Course weekly assessment | 20.00% |
| Retain | 10.00% |

Work Hard

Time spent per week learning new concepts (25% weight)

There will be approximately 4.5 hours of ALEKS per week in class. However, the first day of the school week will be devoted to the students' weekly assessment. Therefore, each student will get 3.8 hours per week in class in "learn mode". The student will have to make up the additional 2.2 hours outside of class (think "homework") to get the 100% of hours (six hours). If a student works in ALEKS 30 minutes, each day, outside of class, s/he will accumulate more than six hours in a week.

| Grade | Total Hours / Week |
|-------|--------------------|
| A | 5.6 - 6.0 |
| B | 5.2 - 5.5 |
| C | 4.8 - 5.1 |
| D | 4.5 - 4.7 |

Work Effectively

Concepts Learned per Hour (20% weight)

| Grade | # |
|-------|-----------|
| A | 2.3 - 2.5 |
| B | 2.1 - 2.2 |
| C | 1.9 - 2.0 |
| D | 1.7 - 1.8 |

Make Weekly Progress

Relative Progression (25% weight)

The student's progression as a ratio of concepts mastered to concepts remaining.

concepts mastered this week

concepts remaining

| Grade | % |
|-------|------|
| A | 9.3% |
| B | 8.4% |
| C | 7.7% |
| D | 7.0% |

Make Absolute Progress to Complete Course

Weekly Assessment (20% weight)

At the beginning of each week, the students are given an assessment, covering the concepts they learned the previous week. Concepts shown to be mastered from the assessment are permanently added to the students "pie" and are not required to be reviewed. Therefore, it is the collection of weekly assessments that progress a student toward completion of the course pie.

The result of the weekly assessments can be viewed by clicking on the student's "Report", then selecting "Full Progress over the last month". The assessment results are shown by the blue bar in the report.

If a student does not progress forward or backward from one assessment to the next, the student will receive a grade of "77". Any positive progression will be given a grade higher than 77 but no higher than 100. Any digression, will be graded less than 77.

Retain

Final Course Assessment (10% weight)

At the completion of a course or at the end of the school year (whichever comes first), the student will be give a final assessment. This comprehensive assessment will cover all the concepts of the course. The percentage achieved will be directly entered in as the final assessment grade.