

ALEKS for Math 1111 and Math 0999

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Decatur Campus

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No More Foundations

- As of Fall 2018, all students will take a college-level math course
- Non-STEM majors will take Math 1001 with or without 0997
- STEM majors will take Math 1111 with or without 0999
- Students taking Math 1111 and 0999 will have a variety of mathematical deficits even beyond what we are used to
- It has been decided that Math 1111 and 0999 should be taught with one software

ALEKS

- Already used in Math 0999
 - currently use Connect in 1111
- Uniquely able to address “a variety of mathematical deficits” by leading students through pre-requisite topics
- Piloted in Fall 2017

Pilot Details

- Two sections of Math 1111 with one section of 0999
 - One 1111 was right after 0999 on Mondays and Wednesdays
 - One 1111 was on Tuesdays and Thursdays
- Students were told during registration that they would be using ALEKS, so may have self-selected
- 26 and 23 in Math 1111 sections
 - 18 and 2 were in my Math 0999
 - 2 and 6 were in someone else's Math 0999
- 25 in Math 0999 section
 - 5 were in someone else's Math 1111

ALEKS Set-up

- One pie for both Math 1111 and Math 0999
- 1111 content in 7 modules
 - 200 topics
 - About 2 weeks each module
- 0999 content in 5 modules
 - 100 topics

Prerequisite Module 1	(42 topics)
Module 1: Linear Functions	(49 topics)
Prerequisite Module 2	(23 topics)
Module 2: Quadratic Functions	(36 topics)
Prerequisite Module 3	(20 topics)
Module 3: Power Functions	(42 topics)
Prerequisite Module 4	(12 topics)
Module 4: Rational Functions	(22 topics)
Module 5: Advanced Functions	(11 topics)
Module 6: Exp/Log Functions	(31 topics)
Prerequisite Module 7	(3 topics)
Module 7: Systems and Circles	(9 topics)

Prerequisite Module 1	(42 topics)	58%	0999 45% start of semester
Prerequisite Module 2	(23 topics)	46%	
Prerequisite Module 3	(20 topics)	31%	
Prerequisite Module 4	(12 topics)	27%	
Prerequisite Module 7	(3 topics)	25%	

Module 1: Linear Functions	(49 topics)	25%	1111 13% start of semester
Module 2: Quadratic Functions	(36 topics)	11%	
Module 3: Power Functions	(42 topics)	11%	
Module 4: Rational Functions	(22 topics)	13%	
Module 5: Advanced Functions	(11 topics)	7%	
Module 6: Exp/Log Functions	(31 topics)	6%	
Module 7: Systems and Circles	(9 topics)	6%	

Math 1111 Course Set-up

- Lecture
- Written exam every two modules
- Supplements for every module
 - Provide written work practice, like exams
 - Allow work on content of that day's lecture
 - Bring topics together
- ALEKS 1111 content was worth 20%
 - A student only in 1111 did not get a grade for the pre-requisite topics, they were just there to help them

Example Worksheet

Linear Equations Supplement

due August 30

Name _____

You may get help from the LTC tutors.

Each problem is worth 10 points. Be sure the two methods lead to the same solution for each equation.

Solve each equation for the variable by hand and give the solution, or state that there is no solution or that all real numbers are solutions. Show all work. Give exact answers; do not round.

Graph each side of the equation and find any intersections. Sketch the graph on this page and label each graph and any points of intersection. Then write the solution, or state that there is no solution or that all real numbers are solutions.

1. $4(x + 1) = 2x - 2(3x - 6)$

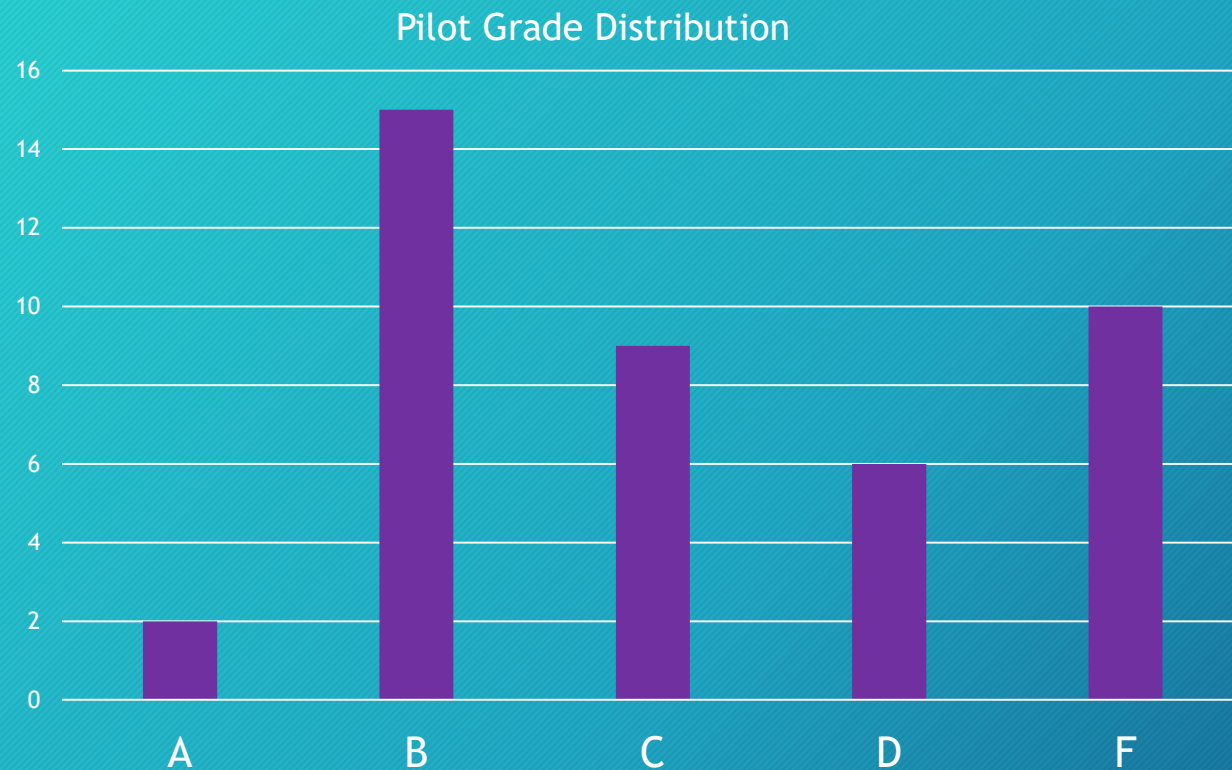
2. $4(x + 1) = 2x - 2(3x - 6)$

Math 0999 Course Set-up

- Twice a week
- Discuss difficult ALEKS topics
 - Skip pre-requisites everyone already understands
- Answer 1111 questions
- ALEKS pre-requisite content was worth 40%

So Did It Work?

Overall, 62% ABCs in 1111



Students in both my
1111 and my 0999:
67% ABC

Students not
enrolled in any 0999:
61% ABC

Prerequisite Module 1	(42 topics)	95%	0999 All students: 93% end of semester
Prerequisite Module 2	(23 topics)	96%	
Prerequisite Module 3	(20 topics)	90%	
Prerequisite Module 4	(12 topics)	87%	
Prerequisite Module 7	(3 topics)	72%	

Module 1: Linear Functions	(49 topics)	83%	1111 All students: 65% end of semester
Module 2: Quadratic Functions	(36 topics)	58%	
Module 3: Power Functions	(42 topics)	70%	
Module 4: Rational Functions	(22 topics)	68%	
Module 5: Advanced Functions	(11 topics)	41%	
Module 6: Exp/Log Functions	(31 topics)	54%	
Module 7: Systems and Circles	(9 topics)	37%	

Prerequisite Module 1	(42 topics)	95%
Prerequisite Module 2	(23 topics)	96%
Prerequisite Module 3	(20 topics)	90%
Prerequisite Module 4	(12 topics)	87%
Prerequisite Module 7	(3 topics)	72%

0999

Students that
passed 1111:
98%
end of semester

Module 1: Linear Functions	(49 topics)	83%
Module 2: Quadratic Functions	(36 topics)	58%
Module 3: Power Functions	(42 topics)	70%
Module 4: Rational Functions	(22 topics)	68%
Module 5: Advanced Functions	(11 topics)	41%
Module 6: Exp/Log Functions	(31 topics)	54%
Module 7: Systems and Circles	(9 topics)	37%

1111

Students that
passed 1111:
76%
end of semester

Next Time

- Math 0999 should meet in a computer classroom
- Students should have to take same instructor for both
- Plan to add some more basic topics to 0999

Questions?

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