



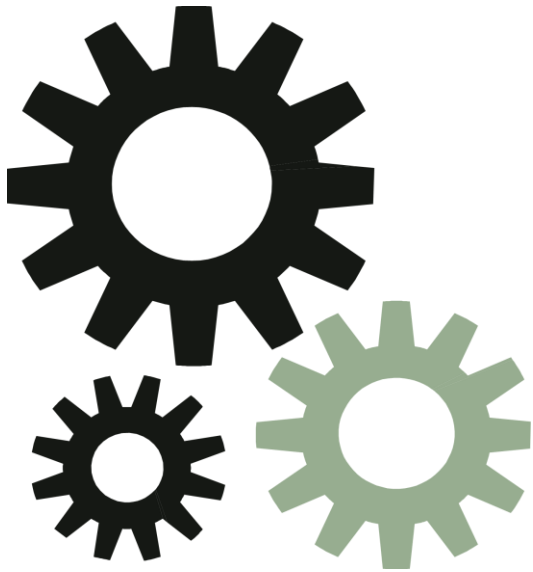
# Math Literacy:

The most versatile developmental pathways option

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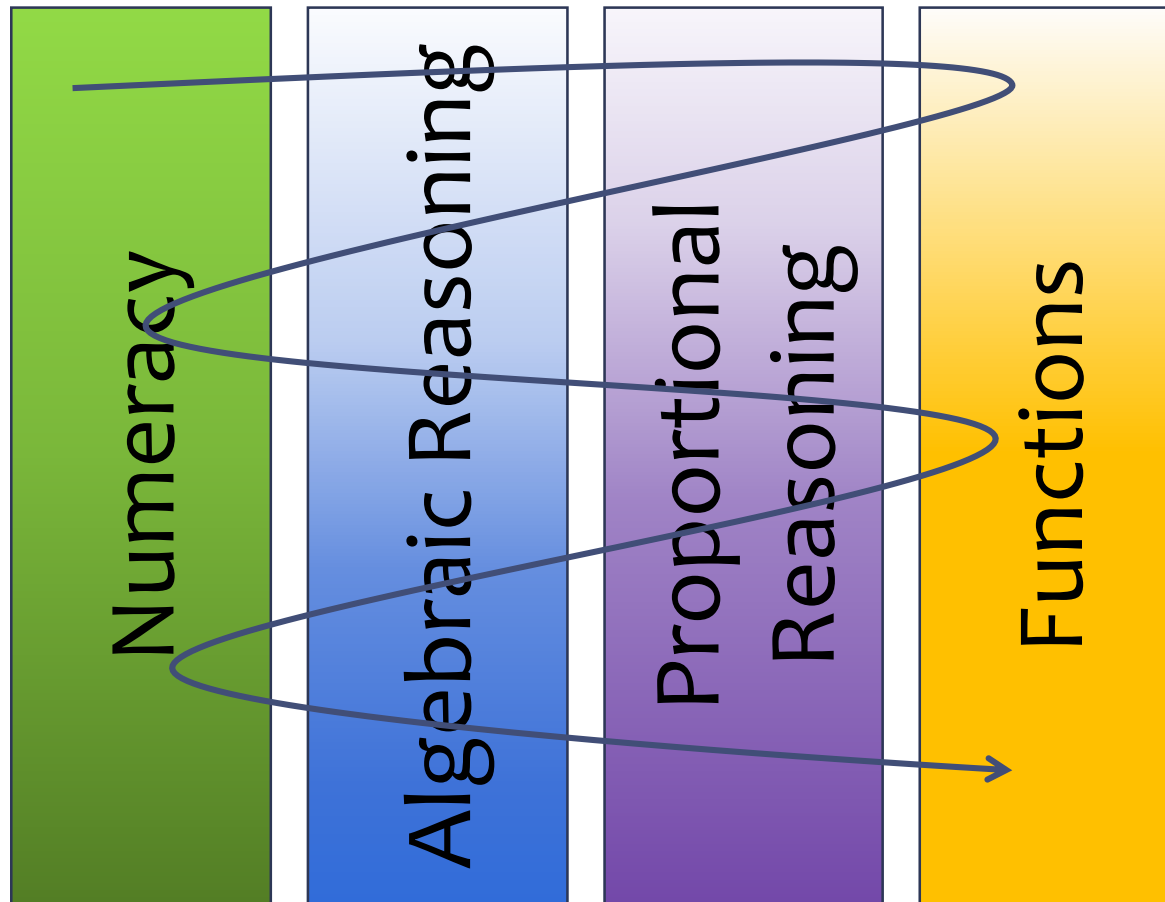
What is Math Literacy?

# Math Literacy for College Students (MLCS) (From AMATYC's New Life Project)



In one semester and 3 - 6 semester credits, Math Literacy gives a student at the beginning algebra level the mathematical maturity to be successful in statistics, liberal arts math, or intermediate algebra.

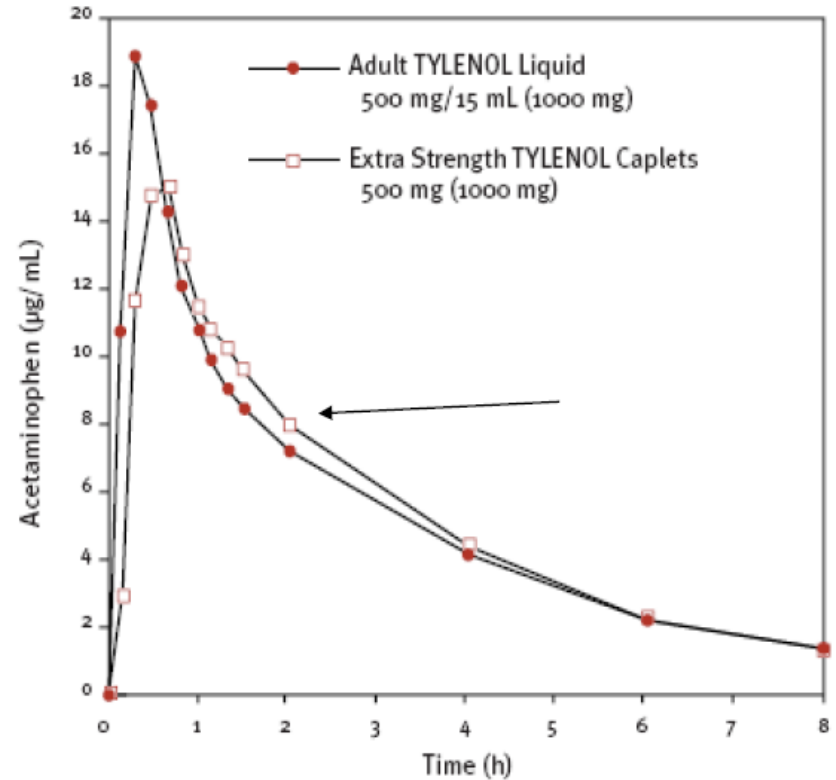
# Approach to developing a student's mathematical literacy



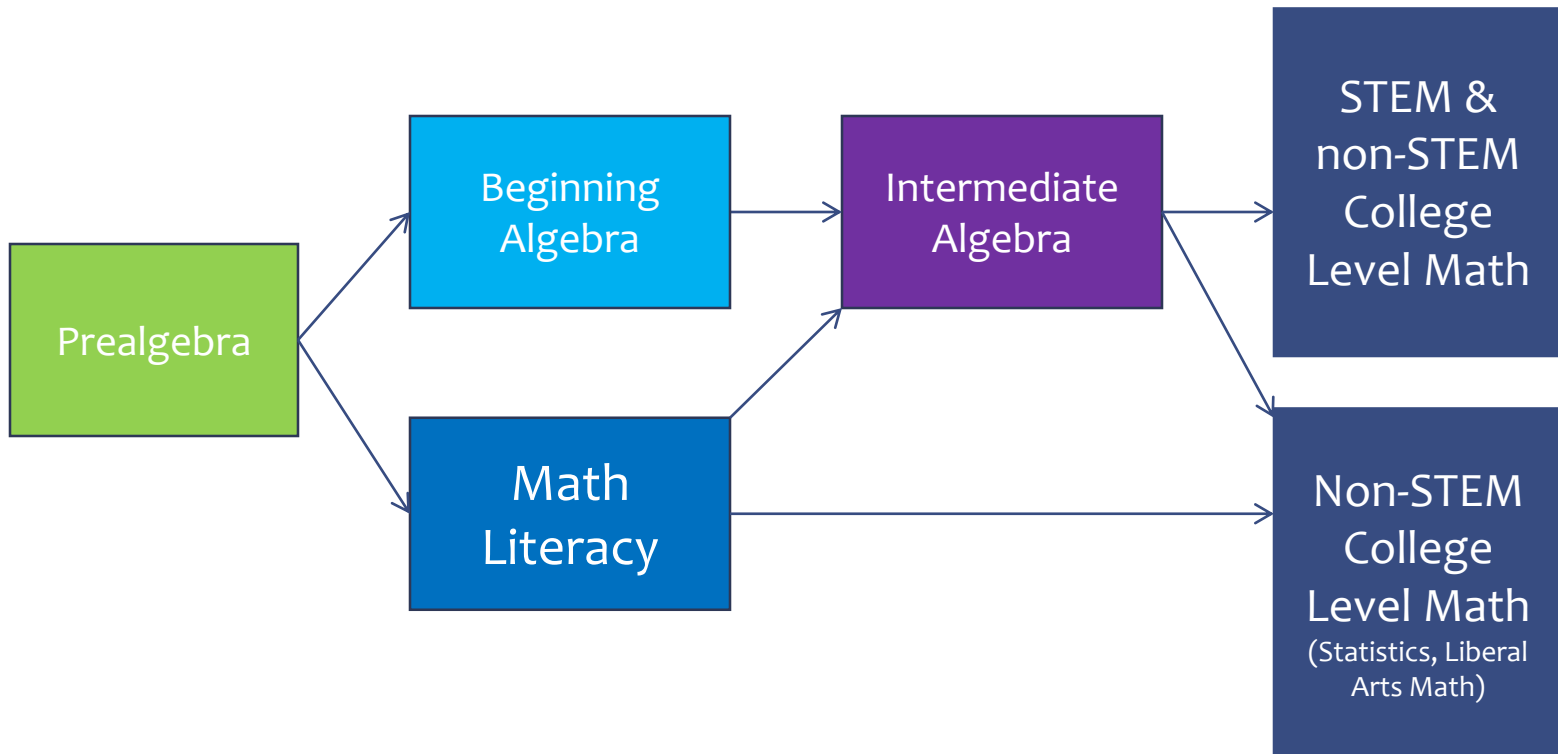
Geometry, statistics,  
student success, mathematical success embedded

# Math Literacy Content: The power of context

- Authentic problem in context
- Theory and examples
- Practice
- Connect and apply concepts
- Homework  
(Even mix of skills, concepts, & applications)



# Common use of Math Literacy: augment traditional sequence



Sound familiar?

You found a developmental pathways course like  
Math Literacy and worked to implement it at your school.



You taught the class and enjoyed it. You saw success with students in the class and the outcome class.

It was something different and it worked.

The next great thing came along and now pathways are out.

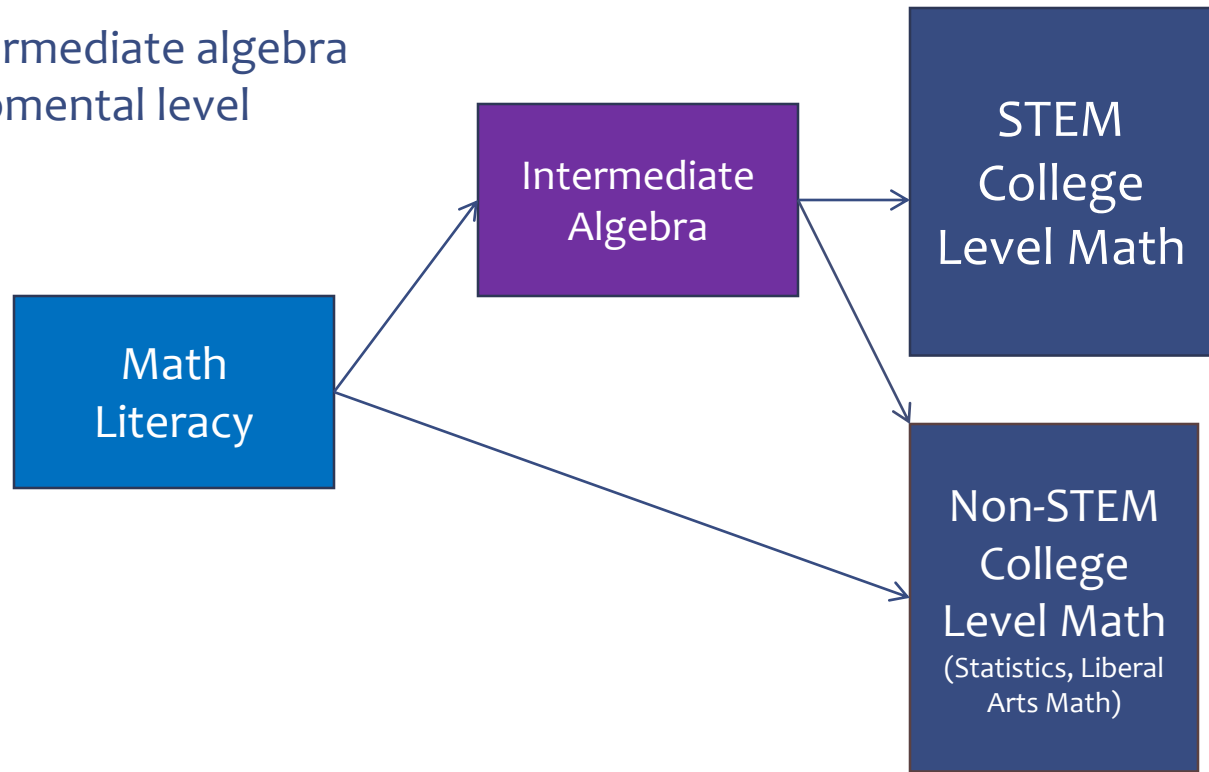
- Max one dev ed course
- Transitional courses at high schools
- No dev ed and/or required corequisites

Now what?

# Issue:

## The state will only allow us to have one developmental math course

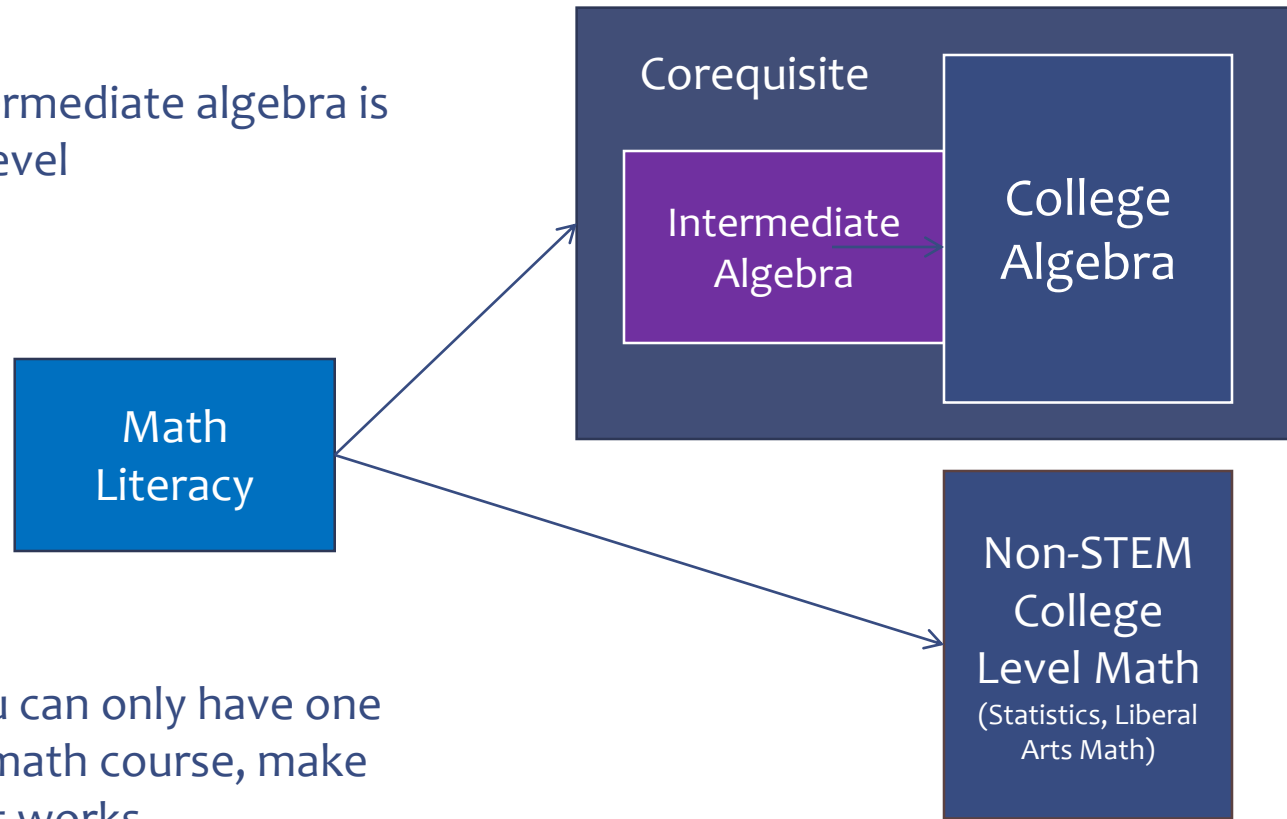
Situation #1: Intermediate algebra is above developmental level



# Issue:

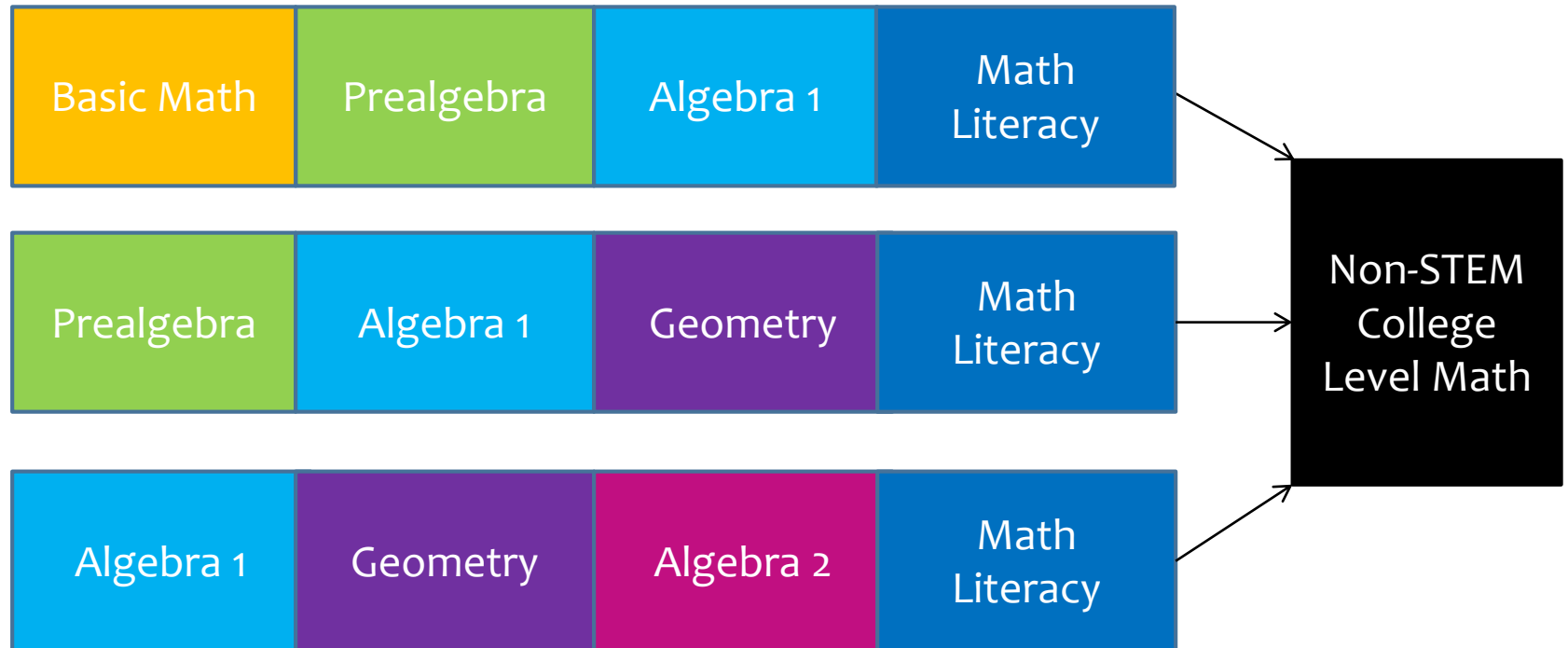
## The state will only allow us to have one developmental math course

Situation #2: Intermediate algebra is developmental level



**Takeaway:** If you can only have one developmental math course, make sure it's one that works.

# Issue: The state wants us to implement transitional courses in the high schools



# Postsecondary and Workforce Readiness Act (PWR Act)

**Public Act 99-0674** (HB 5729); signed by IL Governor on 7/29/16

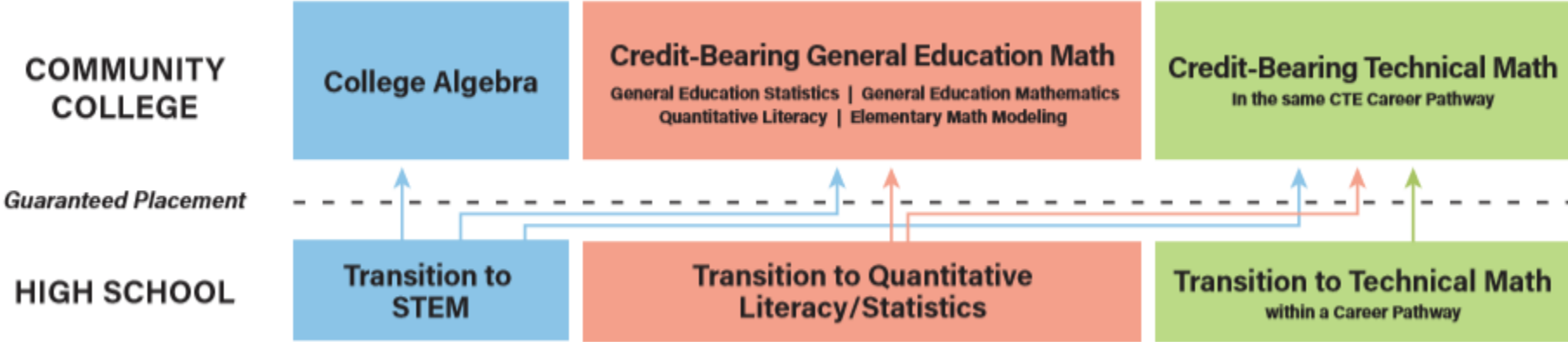
1. Postsecondary and Career Expectations (PaCE)
2. Pilot of Competency-based High School Graduation Requirements
3. College and Career Pathway Endorsements on High School Diplomas
4. Transitional Math Courses

# Transitional Math Courses Overview

Comprised of 3 pathways related to career pathways (**meta majors**):  
**STEM, QL/Statistics, and Technical Math**

- High school courses designed to provide **guaranteed placement** at IL community colleges (without a placement test)
- Developed and administered through **high school and college partnerships**
- **Portability** beyond local colleges when they meet statewide criteria
- **Statewide scaling** over next 3 – 4 years

# Bring pathways to high school, not another algebra class

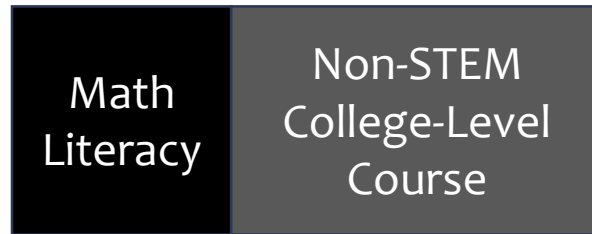


**Learn about transitional math today at 12:40 (Fiesta 6)**



# Issue: My state is getting rid of dev ed and/or requiring corequisite courses.

Corequisite of non-STEM college-level course and Math Literacy



More than typical approach of only changing structure and gluing courses together

Change content and structure

Course:        Statistics

Topic:        Regression

**Skill approach to corequisite remediation**

- Identify slope and y-intercept from simple equations
- Graph simple lines using slope and y-intercept

**Conceptual approach to corequisite remediation**

- Work with simpler applied situations to practice interpreting slope and y-intercept in context

Kudzu vines are invasive and can exhibit incredible growth in favorable conditions. Suppose a vine's length is given as  $L = 525 + 9t$ , where  $L$  is in inches and  $t$  is the number of days since July 1. Identify and interpret the slope and  $y$ -intercept of this linear function.

### SOLUTION

The slope is the coefficient of the independent variable,  $t$ .

$$m = 9 = \frac{\text{change in } L}{\text{change in } t} = \frac{9 \text{ inches}}{1 \text{ day}}$$

The slope tells us that the vine is growing at a rate of 9 inches per day. The  $y$ -intercept is the ordered pair  $(0, 525)$ , which tells us the vine was 525 inches long on July 1.

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# Ways to extend the dev math pathways approach and content

High School

Developmental Level

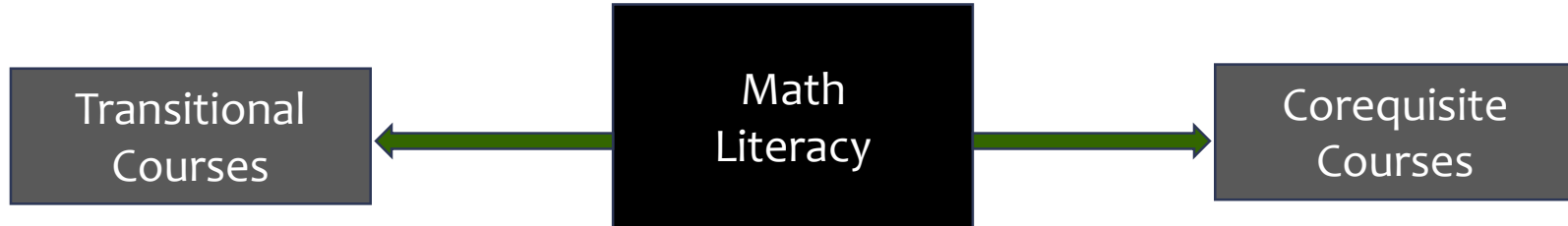
College Level

Audience

HS student who would place into dev math

College student who would find a coreq to be too much

College student who is closer to CL math



Key takeaways:

The pathways approach is effective and can be used in multiple structures, not just standalone dev ed courses.

Pathways content makes new structures effective.

For more information

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