

Does Introduction to College Math Prepare Students for Success in Gateway Math Courses?



May 12, 2017

Smarter Balanced Placement Policy for UH System

- In Dec. 2014, the Chief Council of Academic Officer and the Council of Student Affairs Officers approved the use of SB Scores for PLACEMENT purposes only
- For Math and English/Language Arts entry level courses only
- Scores valid for 24 months
- Pilot for graduating classes of 2016, 2017, 2018

Warning!



Introduction to College Mathematics

- ACCN: MIC1200
- Pilot for 2015-2016 Academic Year
 - Pearl City (5 classes), Farrington (1 class), Waialua (1 class), Kapa‘a (1 class)
- Scaling up for 2016-2017 year
 - Aiea, Castle, Kahuku, King Kekaulike, Leilehua, Mililani, Molokai, Pahoā, Waiākea, Waianāe, Waimea
- Scaling up for 2017-2018
 - Kaua‘i, Kealakehe, Kohala, Konawaena, Waipahu



Assessment of Pilot

- Tracking Student Success into Gateway Courses at UH
- Student Surveys/Focus Groups
- Instructor Interviews/Focus Groups
- External Evaluation for 2016-2017 (Currently being conducted)

Successes

- Practical placement option (in lieu of Compass/Accuplacer) for Early College
- Improved student performance for those previously unsuccessful in math
- Students show improved self-efficacy regarding math skills
- Viable option for fourth year of math for those scoring 1, 2, or 3
- Teacher satisfaction with strategies/materials

Student Comments

- I scored a 2 because math isn't my best subject; but when taking this course, I actually enjoyed math.
- Everything we did was helpful because if we didn't understand something we had different ways to help us understand.
- To me it doesn't matter what score you get (on SB). I recommend this class to anyone who is willing to challenge themselves.
- This class was very interactive, and it has definitely improved my view of math.
- I'm not sure I would have gone to college had I not taken this class.
- It didn't change my mind about going to college as I was always planning to go. However, it helped me better understand college and explore my options.

Teachers' Voices

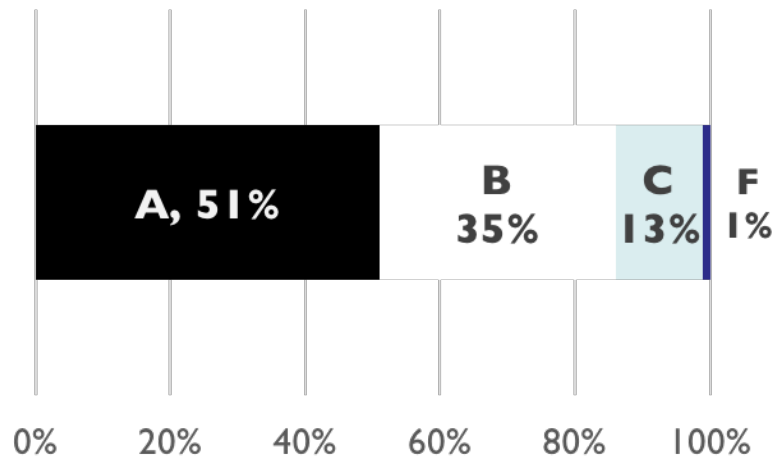
- Teachers need to have contacts and resources outside the school and understand the transitional needs of students to move from high school to college
- Students are able to see math in real-life situations. The math is also at a level where students can really grasp the understanding behind it. That is where real learning takes place.
- Teachers need to be willing and grow with their students to model the growth mindset.
- All high schools should offer this class because we teach to be a better person, not just a better student.
- **“Grit” is the key in my classes and helps with the self-directed learner, seeking perseverance, and trying to think creatively outside the box.**

Lessons Learned

- Timing for the placement of students
- Materials
 - Electronic Text
 - Seed money for project based activities
- Messaging to counselors and registrars

Pilot Results: HIDOE Grades

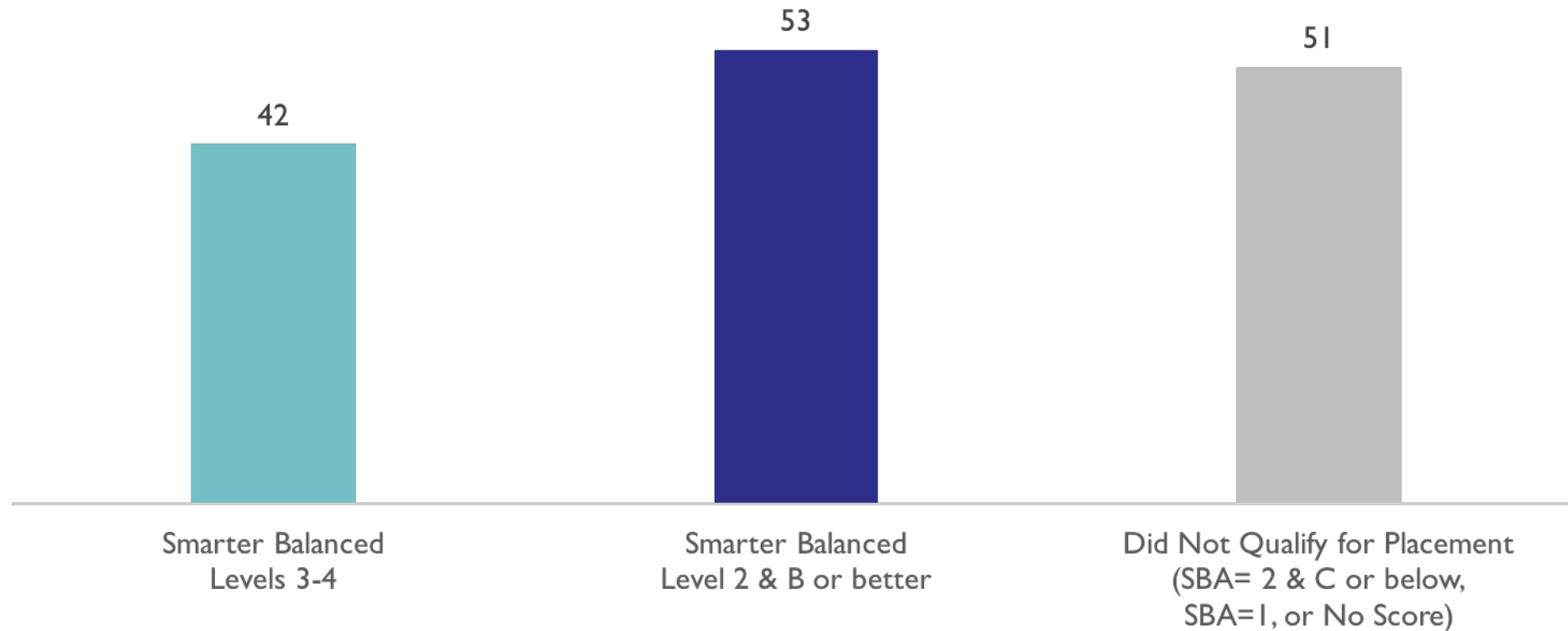
Course Grade Distribution



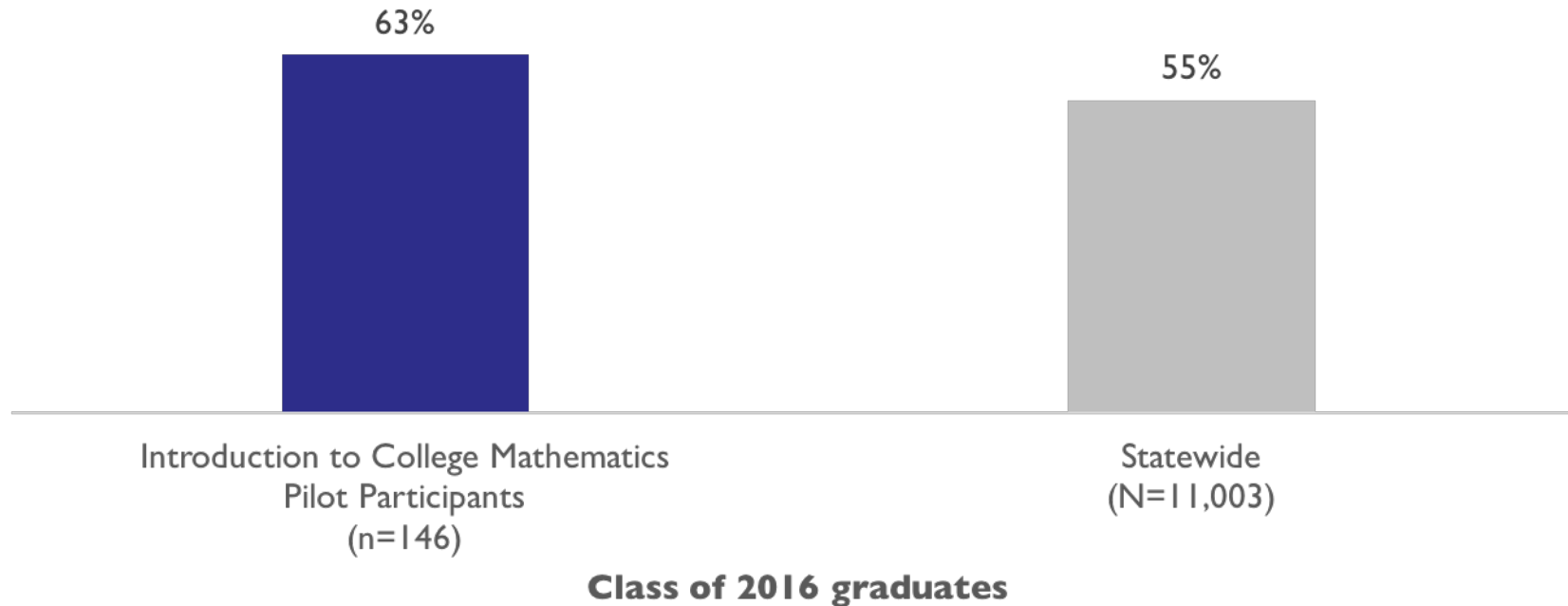
Summary

- 4 schools (8 classes)
- 146 students
- 86% earned a grade of A or B

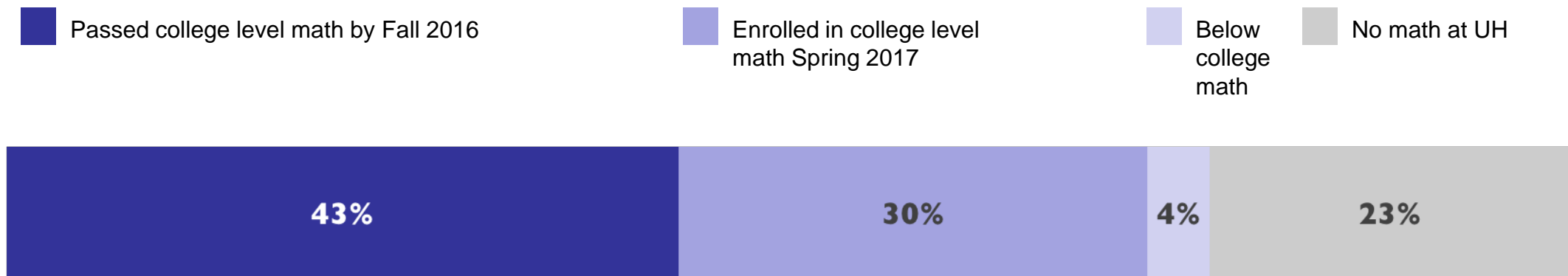
Of the 146 Intro to College Math pilot participants who graduated in 2016, 36% met the UH placement policy criteria because of SB score of 2 and grade of B or better in the course



Pilot participants had higher college enrollment rates.



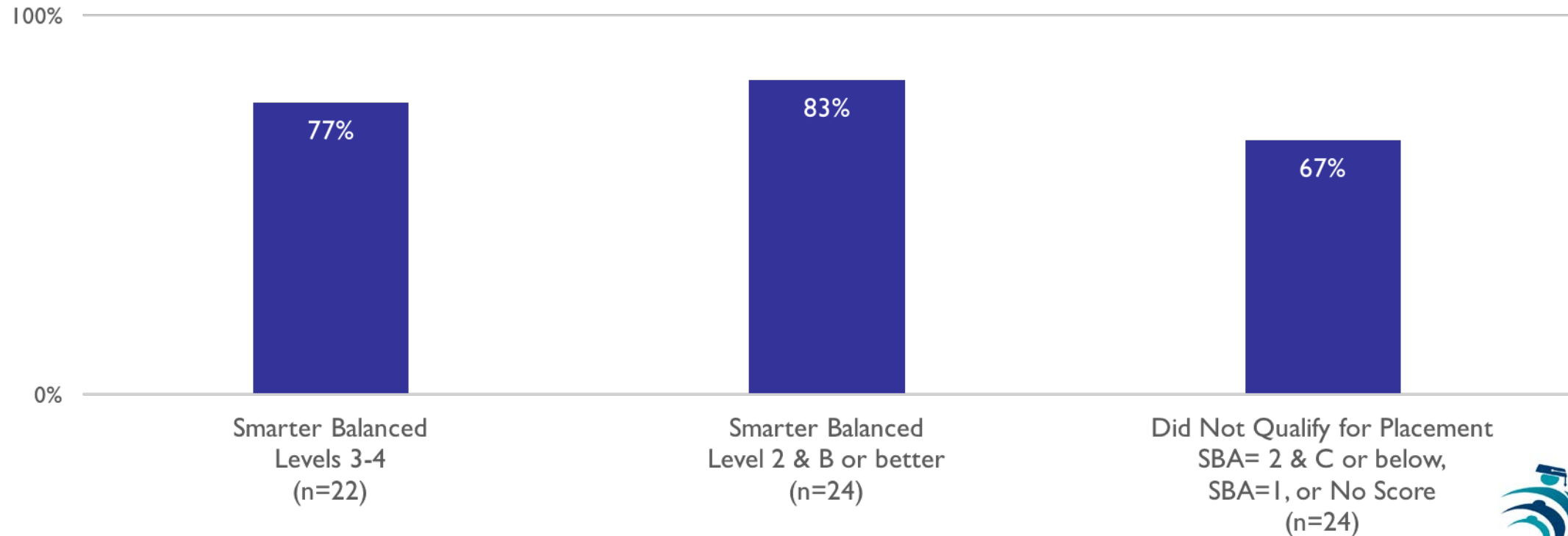
Of pilot participants attending a UH campus, nearly $\frac{3}{4}$ enrolled in a college level math at UH by Spring 2017.



BY SB SCORE

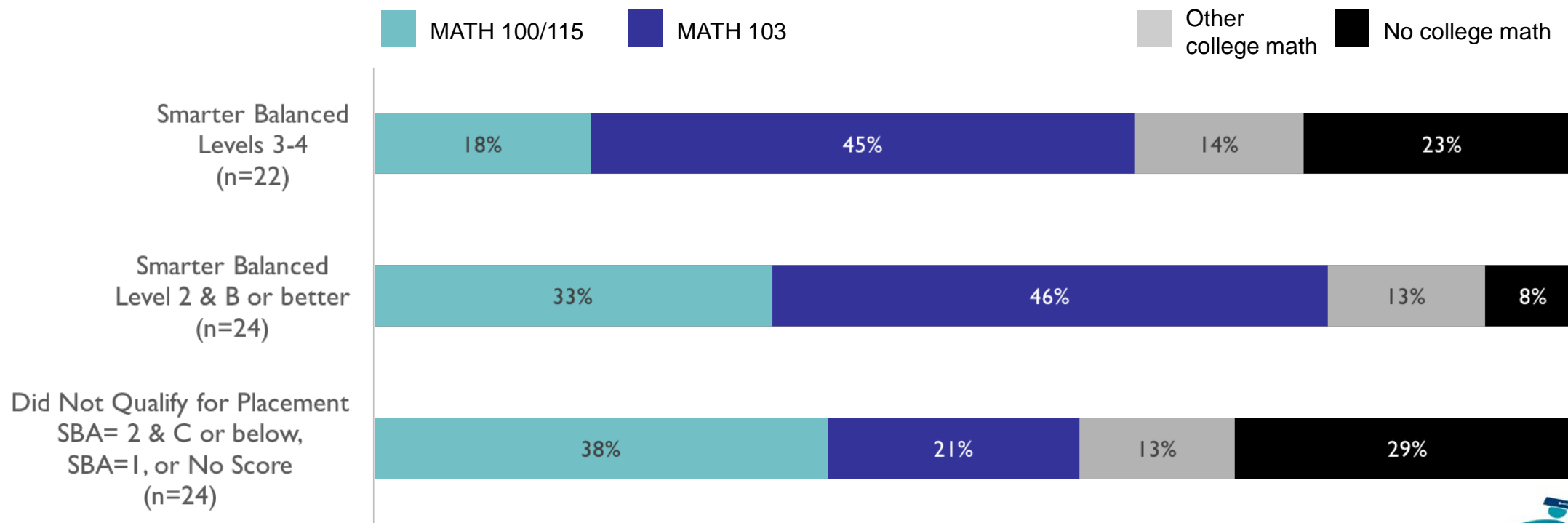
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Attempted College Math & College English by Spring 2017

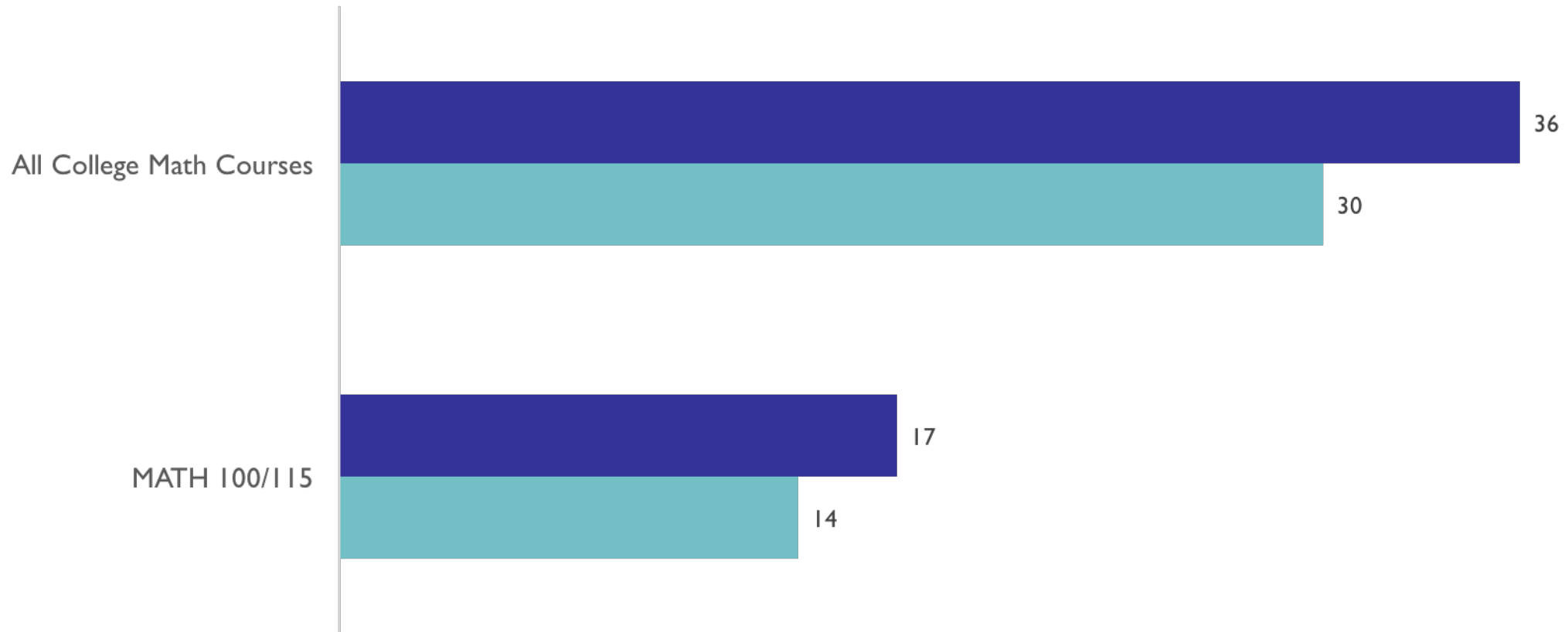


Among those who qualified for college placement at UH, **MATH 103** was more popular than **MATH 100/115**.

Any college level math course attempted by Spring 2017



Majority of graduates who took a college level math by Fall 2016 passed their courses



Other Transition Course Work

- English Language Arts Transition Course
 - Expository Reading and Writing Course created by California State University
 - Pilot for 2017-2018 Academic Year
 - Schools: Castle HS, **Farrington HS**, Mililani HS, **Pearl City HS**, **Waialua HS**
- Middle School Transition Course
 - 7th grade intervention so students are “on-track” for 8th grade math and, subsequently, ALG I in 9th grade
 - 7th grade intervention so students are eligible for ALG I in 8th grade



pus Road
Honolulu, HI 96822

www.p20hawaii.org