



The Quest for the Perfect Indicator

What a Long, Strange Trip it's Been

Cal-PASS[★]



Competing Requirements

Academic Performance Index (API)
Adequate Yearly Progress (AYP)
Standardized Testing and Reporting (STAR)
California High School Exit Exam (CAHSEE)
No Child Left Behind (NCLB)
NRS (National Reporting System)

Time to Degree
Degree Completion
Transfer Rates
Vocational vs. Degree Seekers



Origins of Cal-PASS

1997-SDSU/GCCCD agree to share data on common students

Goal is to improve success by tracking performance

Collaborative relationship with local faculty

Currently over 2,000 institutions

Currently over 150,000,000 records



Cal-PASS



Typical Request

The questions for District A are:

Is it better (keeps kids on a successful math track through high school) for a student to take algebra in grade 8, regardless of their level of readiness for the concepts even if they end up repeating Algebra in 9th grade

or is it better (keeps kids on a successful math track through high school) for a student to take an Introduction to Algebra course (that reviews 6th and 7th grade standards, and previews algebra) and then take Algebra 1 in 9th grade?

Layers to the questions:

- for students that take algebra in grade 8
- how many repeat algebra in grade 9
- how many are successful the second time
- how many of these students go on to successfully complete 4 years of math courses in high school???

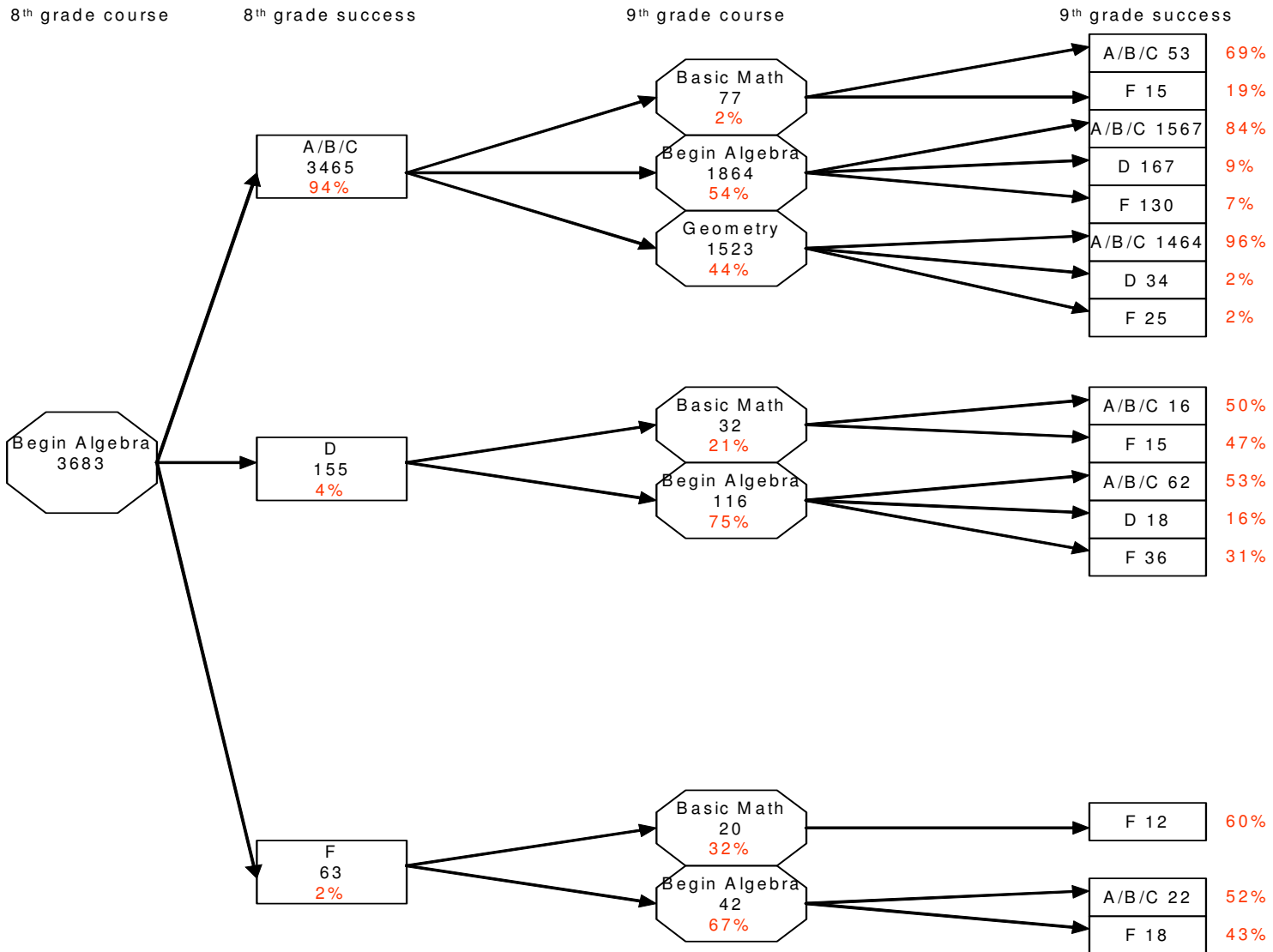
for students that take the Introduction to Algebra course in 8th grade

- how many successfully complete algebra 1 in grade 9
- how many go on to successfully complete 4 years of math in high school??

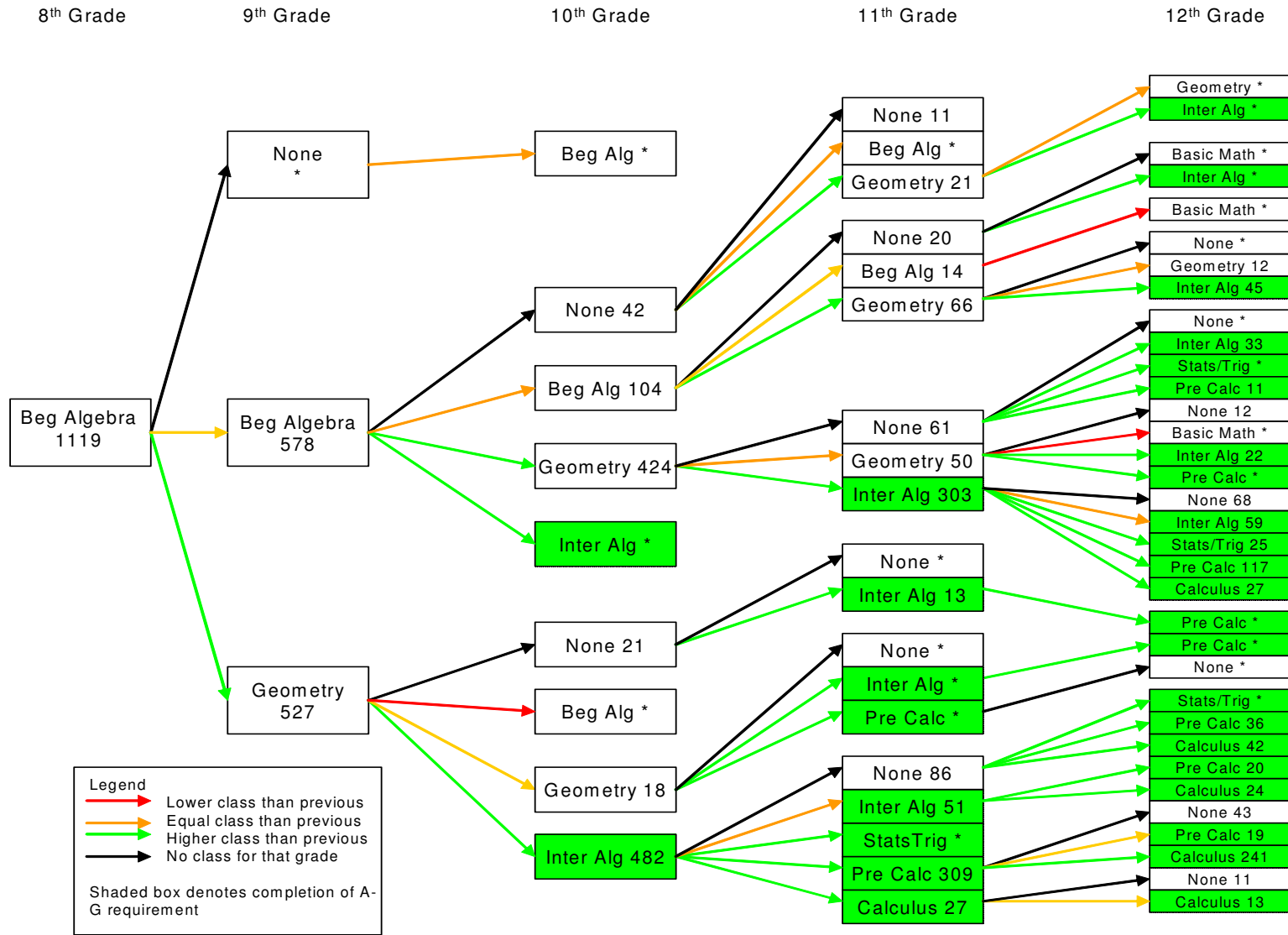
How do both groups take Physics and Chemistry?

How many are successful in Physics and Chemistry, two science classes heavily dependent on math?

8th to 9th Grade Transition



High School Math Transitions



High School to Community College

Red = attempted class in college lower than that already passed in high school

Gold = attempted class in college equal to that already passed in high school

Green = attempted class in college higher than that already passed in high school

		First math class attempted in community college								Total	
		Basic Math	Pre-Alg	Beg Alg	Geo	Int Alg	Stats+	Pre-Calc	Calc	%	N
Max HS math with grade of C or better	Basic Math	11%	14%	41%	1%	28%	5%	1%	0%	100%	730
	Pre-Alg	*	*	*	*	*	*	*	*	100%	*
	Beg Alg	11%	10%	42%	1%	29%	5%	2%	0%	100%	1291
	Geo	2%	3%	29%	2%	49%	9%	5%	1%	100%	1758
	Int Alg	1%	2%	14%	1%	47%	21%	13%	2%	100%	5966
	Stats+	0%	0%	3%	0%	26%	47%	19%	4%	100%	238
	Pre-Calc	0%	0%	2%	0%	21%	38%	29%	10%	100%	2485
	Calc	0%	0%	0%	0%	4%	28%	21%	48%	100%	585
Total		320	377	2232	101	4824	2743	1775	682		13054

Community College To University

		First math class attempted in university									Total	
		Basic Math	Pre-Alg	Beg Alg	Geo	Int Alg	Stats/ Finite	Precalc	Calc	Lin Algebra	Percent	Count
Highest level of math in community college successfully completed	Basic Math	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	*
	Pre-Alg	*	0%	0%	0%	0%	0%	0%	0%	0%	100%	*
	Beg Alg	0%	0%	0%	0%	*	*	*	0%	*	100%	*
	Geo	*	0%	0%	0%	*	*	*	*	0%	100%	*
	Int Alg	*	0%	0%	23%	*	56%	*	*	*	100%	100
	Stats/ Finite	0%	0%	0%	8%	9%	58%	*	*	12%	100%	118
	Precalc	*	0%	0%	0%	0%	34%	*	40%	*	100%	53
	Calc	0%	0%	0%	*	*	25%	0%	38%	32%	100%	60
	Lin Algebra	0%	0%	0%	0%	*	29%	*	0%	68%	100%	79
	Total	*	0	0	34	18	188	22	59	95		430

* suppressed when cell size is less than 10

Red = transitioned down at least one level from community college to university,

Yellow = stayed at same level in university as in community college,

Green = transitioned up at least one level from high community college to university.

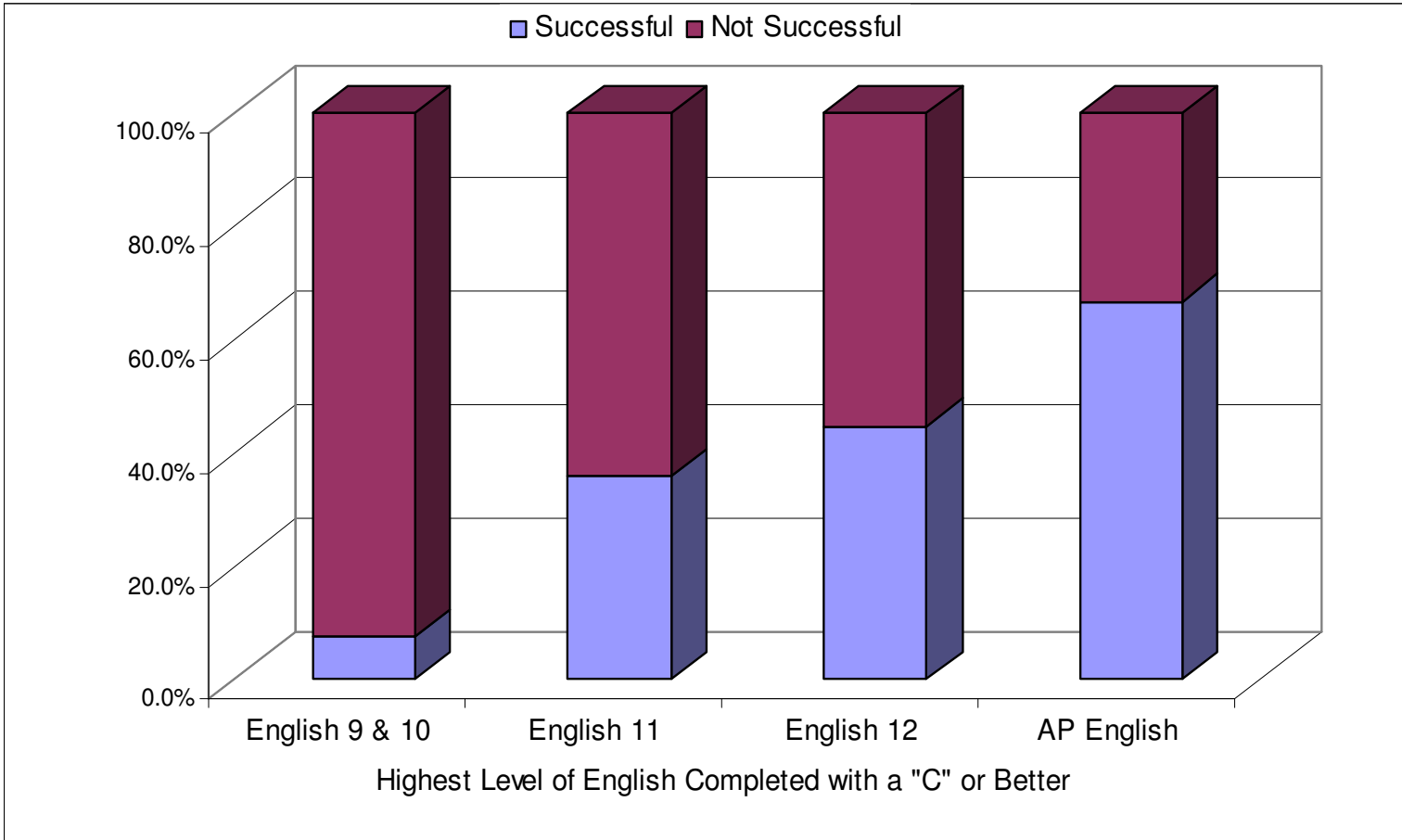
Turquoise=Possible transfer from STEM to non-STEM pathway

Forest Green-Possible transfer from non-STEM to STEM pathway

Please note that the math categories have been assigned by research staff, and will need to be verified by local faculty.

Tables 3 and 4 are provided for this purpose.

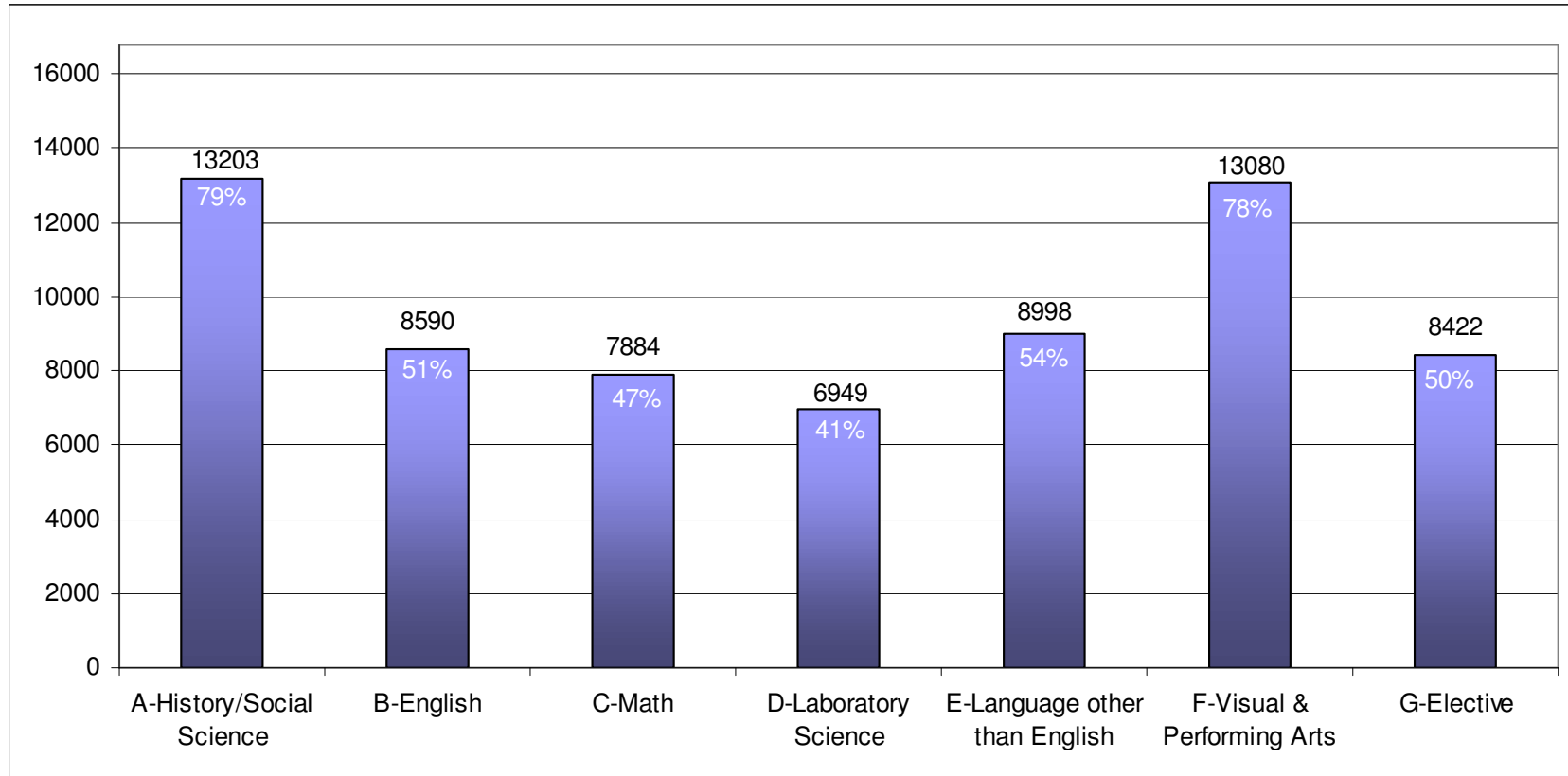
English to Science



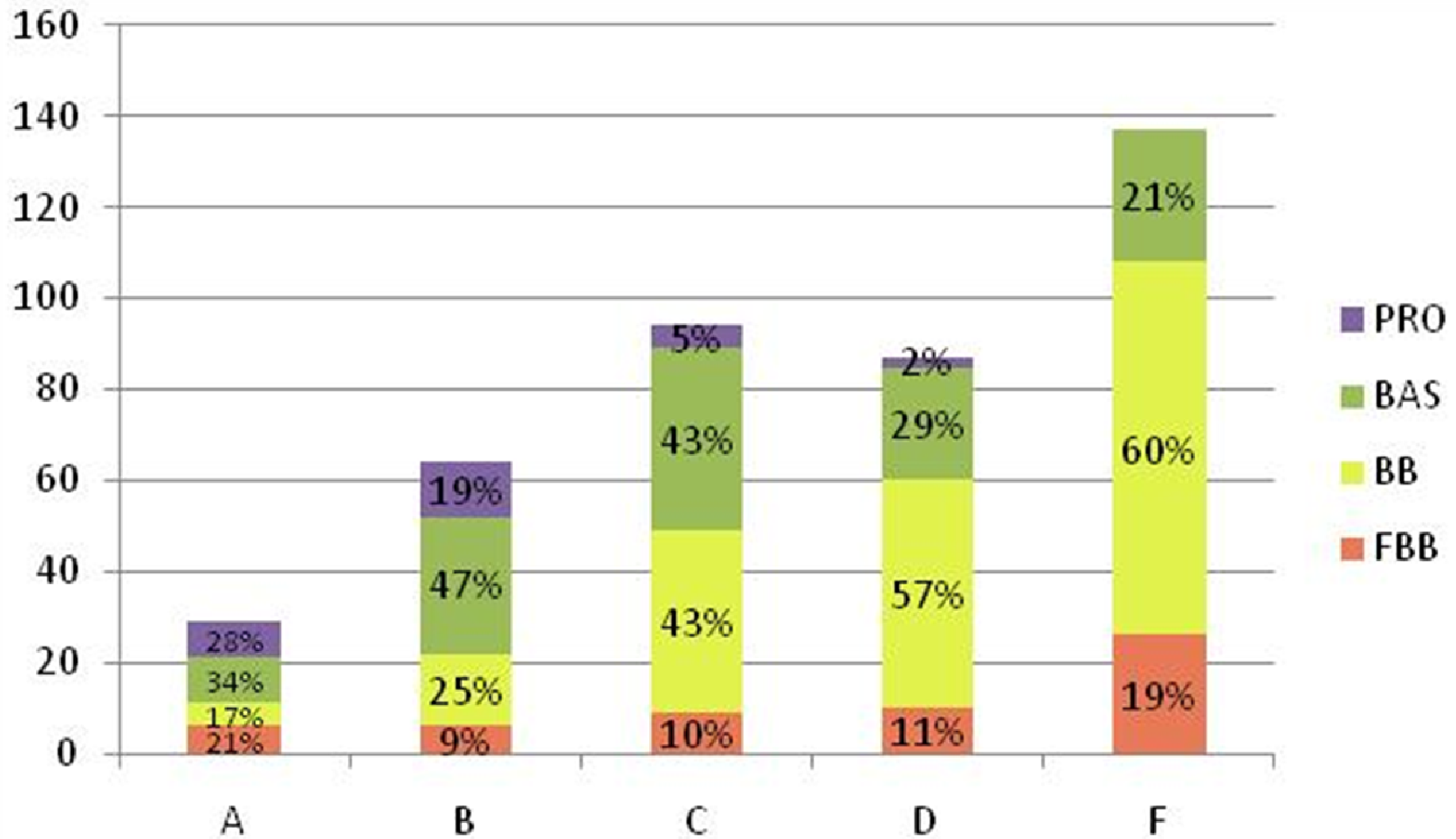
Math to Science

Last <u>Community College</u> Math Course Completed	Successful	Not Successful	n
Basic Math	11.1%	88.9%	9
Pre-Algebra	19.2%	80.8%	26
Begin Algebra	33.3%	66.7%	51
Intermediate Algebra	50.7%	49.3%	136
Statistics	78.1%	21.9%	32
Advanced Algebra	62.5%	37.5%	16
Calculus	62.6%	37.4%	99
Total	50.5%	49.5%	369

A-G Requirements

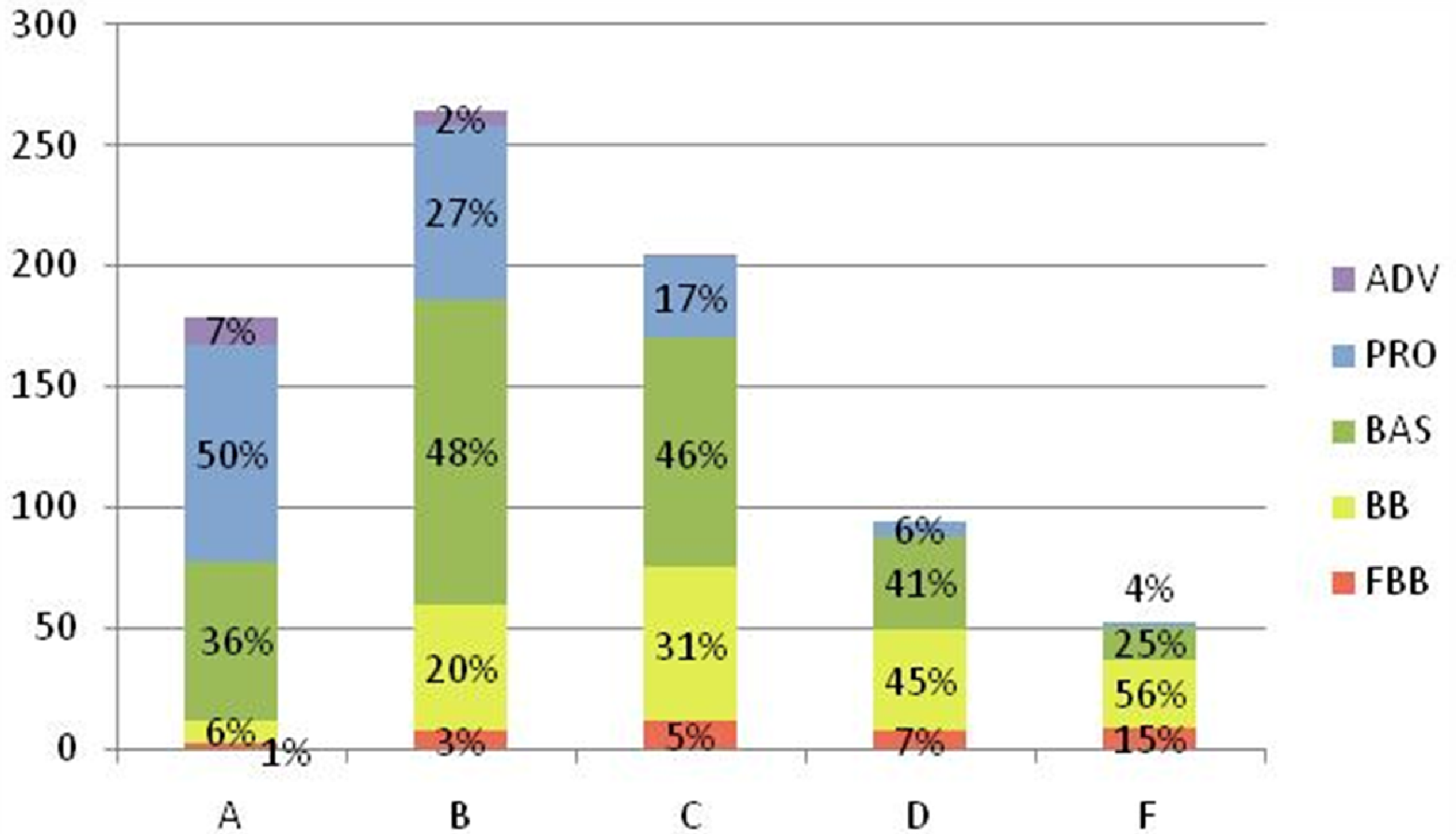


Algebra I Course Grades and CST Performance Levels (School A)



Note: Pearson $r = 0.387$ (significant at the .001 level)

**Algebra I Course Grades and CST Performance Levels
(School B)**



Note: Pearson $r = 0.486$ (significant at the .001 level)

How to Contact Cal-PASS Researchers

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