

Mathematics End of Course Exams & Science Measurements of Student Progress

SETTING PERFORMANCE STANDARDS

State Board of Education
August 9, 2011 1:00-3:00
OSPI Brouillet Conference Room, Olympia, WA

Alan Burke, Deputy Superintendent , OSPI
Robin Munson, Assistant Superintendent, OSPI
Cinda Parton, Director of Assessment Development, OSPI
Tom Hirsch, Assessment Evaluation Services



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Agenda

- Standard setting approval process
- Description of standard setting events
 - Composition of panels
 - Standard setting activities
- Recommendations from standard setting panels
- Superintendent's recommendation to the Board
- Board Action



Standard Setting Approval Process

Purpose of Today's Action by the Board

- Today, the Superintendent is recommending “cut scores” to be used on the End of Course Mathematics exams and the Measurements of Student Progress in Science
- Each test has three cut scores, separating four levels of student performance:
 - The cut between “Below Basic” and “Basic”,
 - The cut between “Basic” and “Proficient”, and
 - The cut between “Proficient” and “Advanced”
- The Board’s cut scores will be used to report the 2011 results, and will be used in future years until such time as the standards are revised or revisited.



Standard Setting Approval Process

Approval of the Procedures

- The State Board and the Superintendent's national technical advisory committee on assessments reviewed and approved the process to be used for the 2011 End of Course Exams in Mathematics and Science Measurements of Student Progress on several occasions.
- This process began in the spring of 2008 for mathematics and in spring of 2009 for science, when new academic content standards were approved.
- New assessments aligned to those new content standards were given to students this spring.



Standard Setting Approval Process

Approval of the Procedures

Event	Math Date	Science Date
New standards approved	July 2008	June 2009
Analysis of "assessible" standards	Sept-Oct 2008	April 2009
Review of Item Specifications	May 2009	June 2010
Item writing for new assessments	May 2009	July 2009
Test Build for 2010 tests with new pilot items	June 2009	Oct 2009
2010 tests administered with new pilot items	April 2010	May 2010
Test Map Meeting	May 2010	August 2010
Development of Performance Level Descriptors (PLDs)	Sept 2010	Sept 2010
NTAC reviewed test maps and linking plan	Oct 2010	Oct 2010
Test Build for Spring 2011 Administrations	Oct 2010	Oct 2010



Standard Setting Approval Process

Approval of the Procedures

Events	Math/Sci Date
Standard setting plan approved by NTAC and reviewed by State Board of Education	Winter/Spring 2011
Teachers from across state trained on PLDs via online training	Feb–Apr 2011
Teachers predict student performance on state tests for Contrasting Groups Study	April 2011
Spring 2011 MSP administered	May–June 2011
SBE final approval of standard setting plan	July 2011
Standard setting events: <ul style="list-style-type: none"> • Practitioner recommendations • “Articulation panel” recommendations • “Policy panel” recommendations • NTAC certifies process was followed 	August 2011
State Board of Education reviews recommendations and sets the Achievement Standard	August 2011
Scores released	End of August



Standard Setting: Recommendations from Multiple Sources

- **Contrasting Groups Study** (n = 250 teachers; 13,240 students)
 - Individual ratings of students by their teachers before tests were given
- **Grade-level Panels** (n = 115)
 - Implemented standard setting activities across three days, resulting in a set of recommended cut scores
- **Articulation Panels** (n = 16)
 - Reviewed grade/course level recommendations, resulting in revised recommendations
- **Policy Advisory Panel** (n = 13)
 - Reviewed both sets of recommendations in light of district policy issues; made separate recommendations



Composition of Panels

- **Grade-/Course-level Panels**
 - 115 educators/community members (about 30 per test)
 - 70% West of Cascades; 65% from majority White schools or districts; 58% from above average Free/Reduced meals schools/districts
- **Articulation Panel**
 - 16 members
 - ▶ 8 members from science (4 from each grade level)
 - ▶ 8 members from mathematics (4 from each course)
- **Policy Advisory Panel**
 - 13 district assessment coordinators, principals, and superintendents



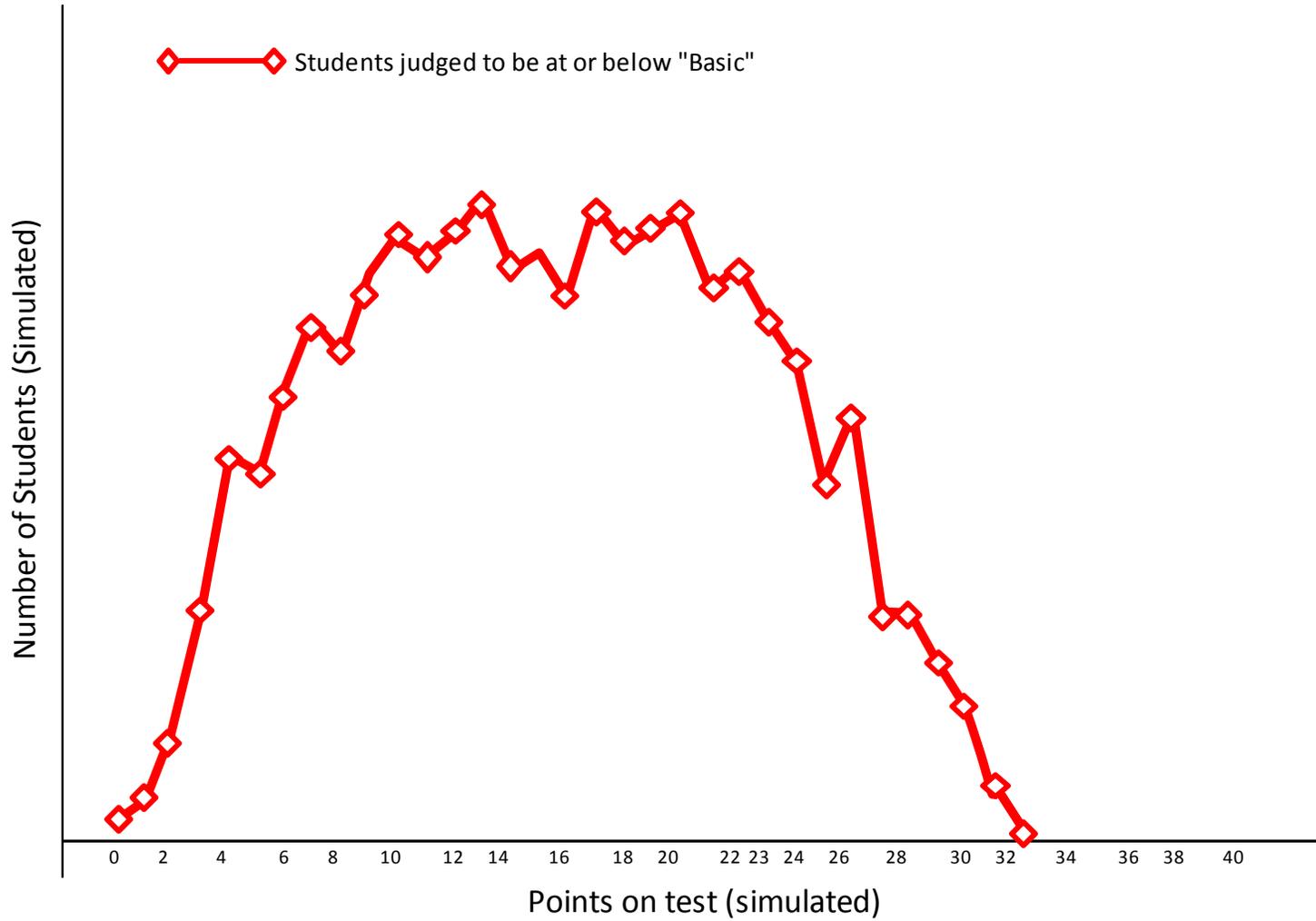
Standard Setting Activities

- Orientation to test development
- Taking the test
- Examining the “Performance Level Descriptors”
- Ratings using an “Ordered Item Booklet”
 - Round 1 (Data from Contrasting Groups study)
 - Round 2 (Item difficulties)
 - Round 3 (State percent at each performance level)
- Articulation Panel (Thurs Aug 4 for science & Fri Aug 5 for math)
 - 8 members each panel (4 from each grade- or course-level panel)
- Policy Advisory Panel (Mon Aug 8)
 - 13 district assessment coordinators, principals, and superintendents
- National TAC review of activities and results (Mon Aug 8)



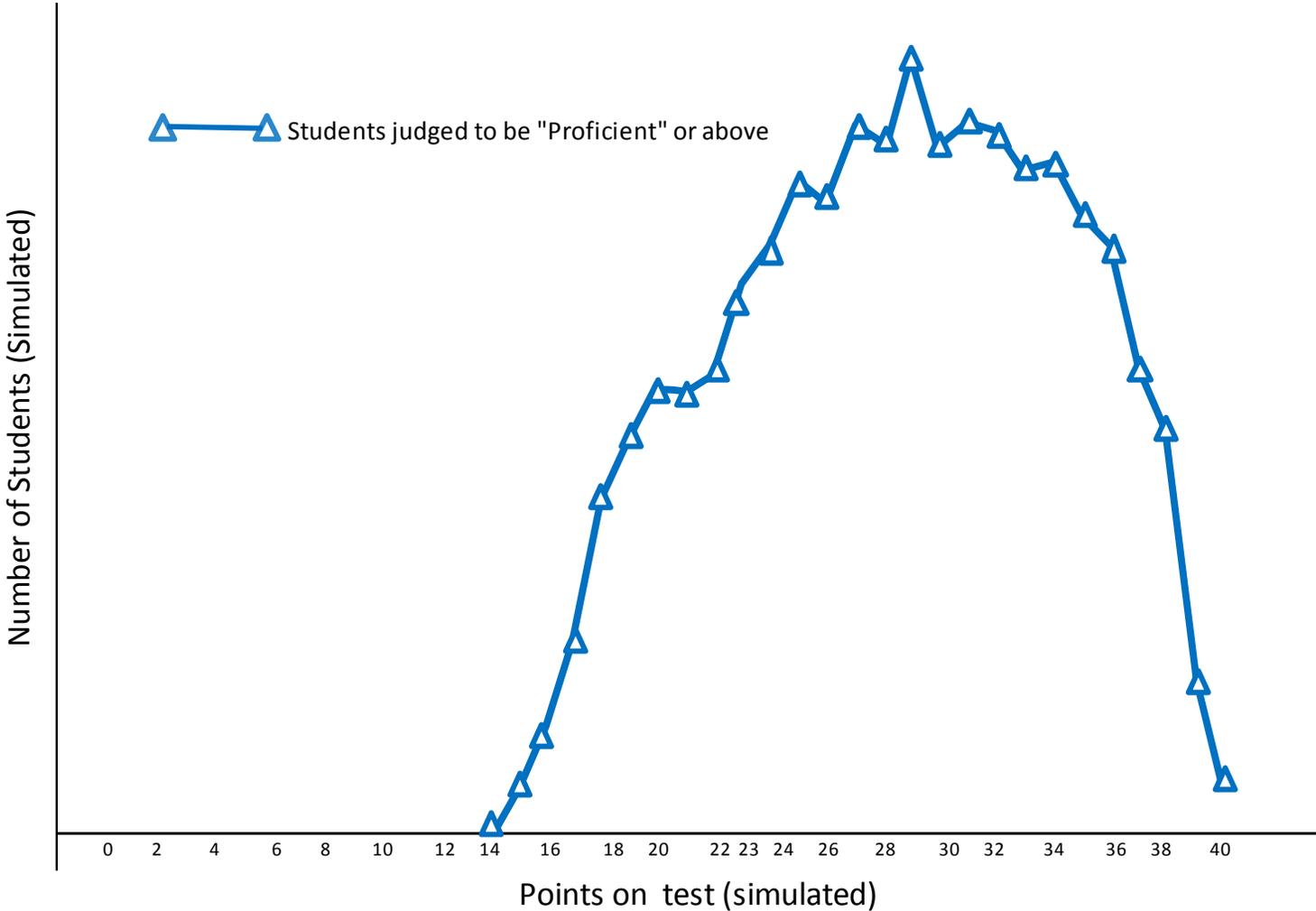
Students rated as “At or below Basic” using criteria in PLD for Basic

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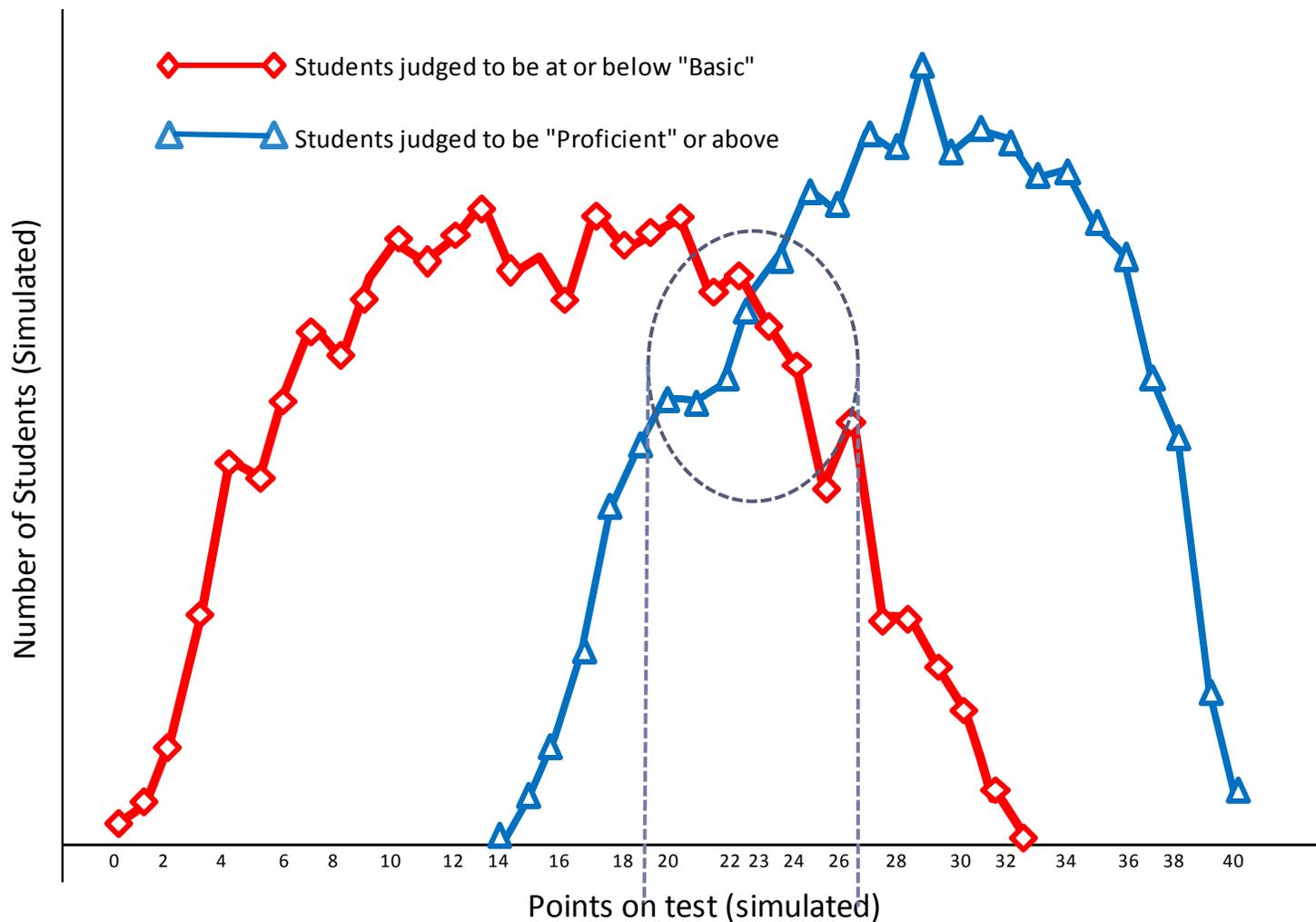
Students rated as “Proficient or above” using criteria in PLD for Proficient

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Intersection indicates a region for where “Basic” separates from “Proficient”

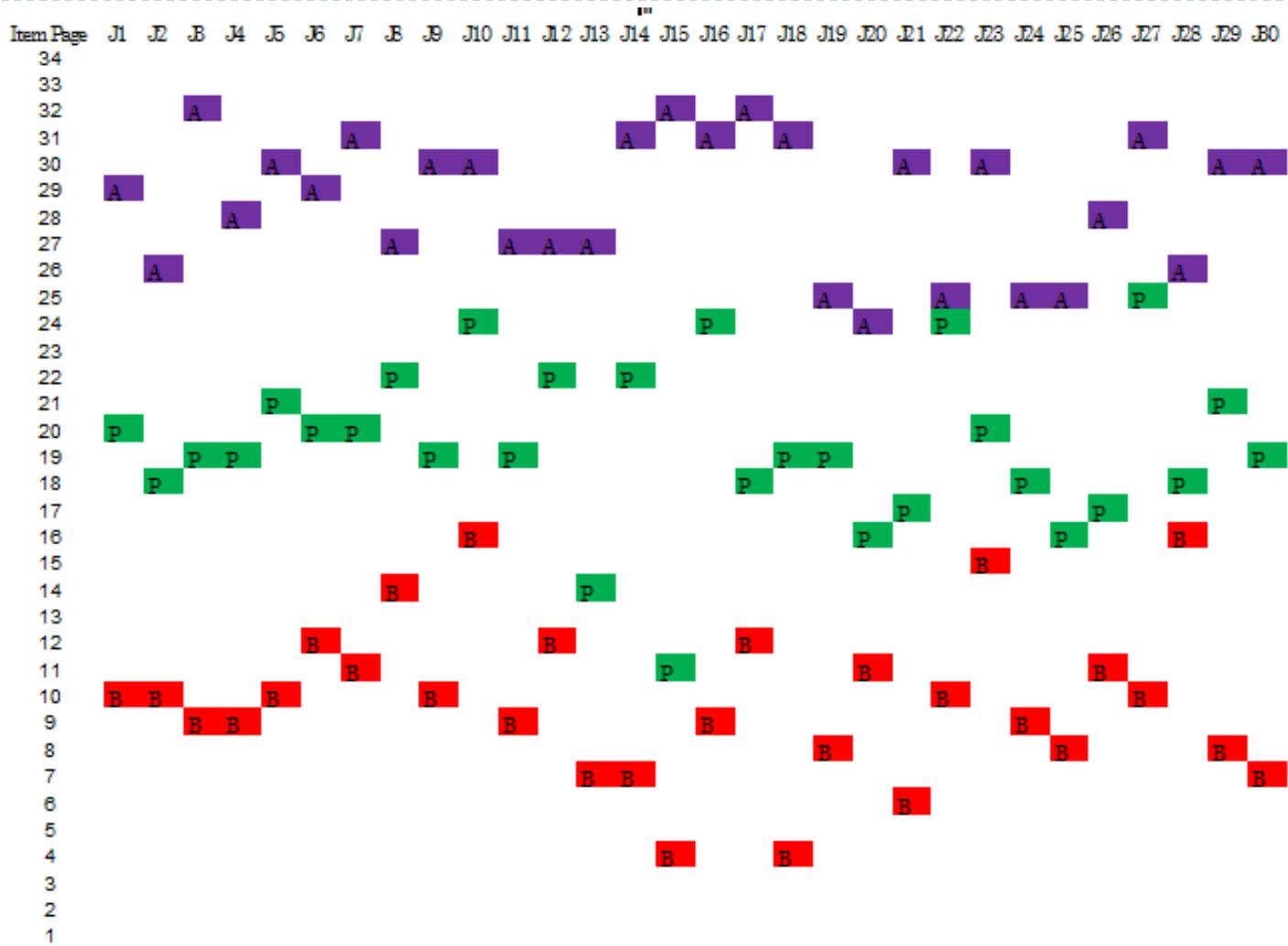
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Ratings from a Sample Standard Setting Panel

ROUND 1: Groups had Contrasting Groups information

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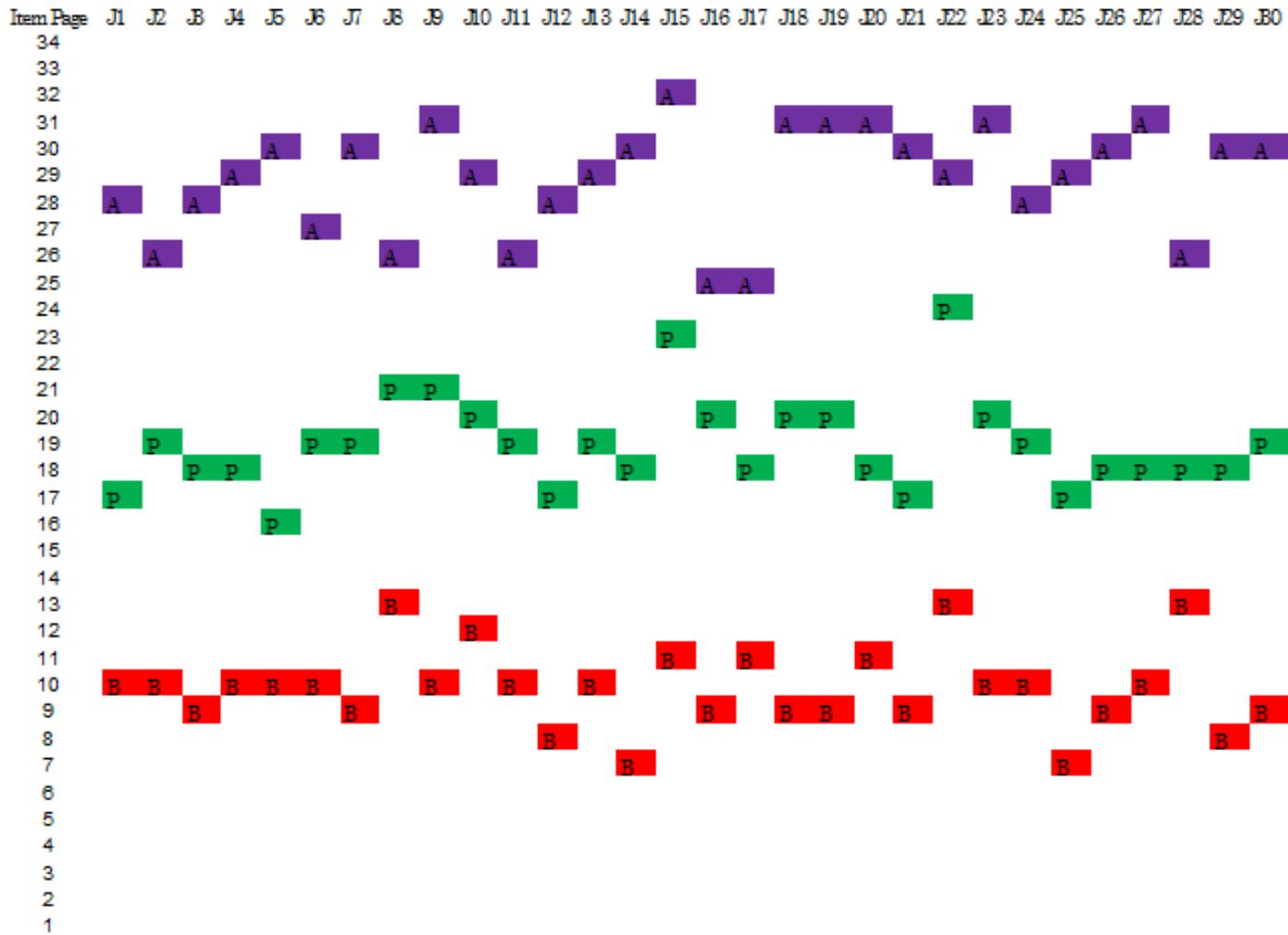
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Ratings from a Sample Standard Setting Panel

ROUND 2: Groups had Item Difficulty information

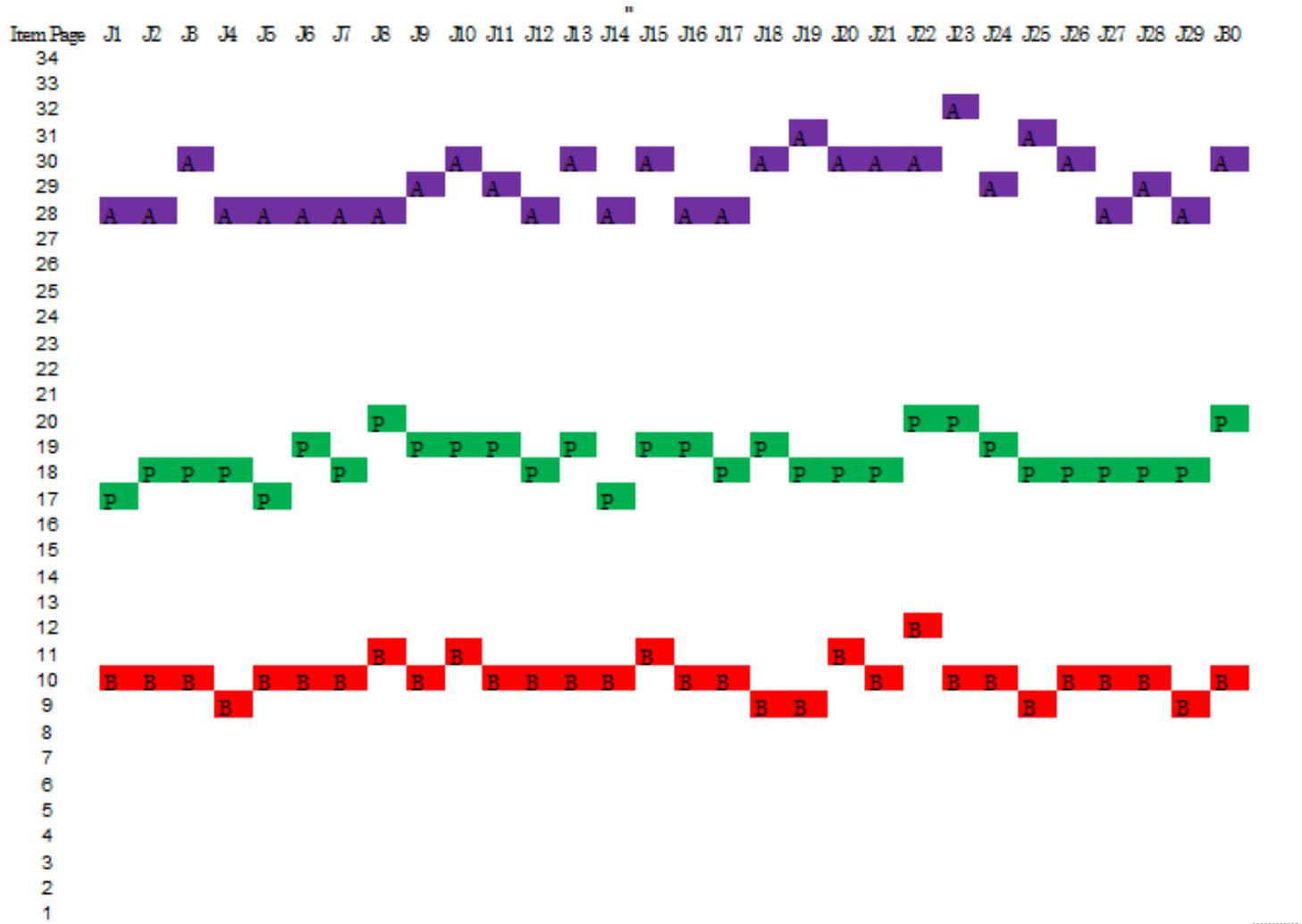
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Ratings from a Sample Standard Setting Panel

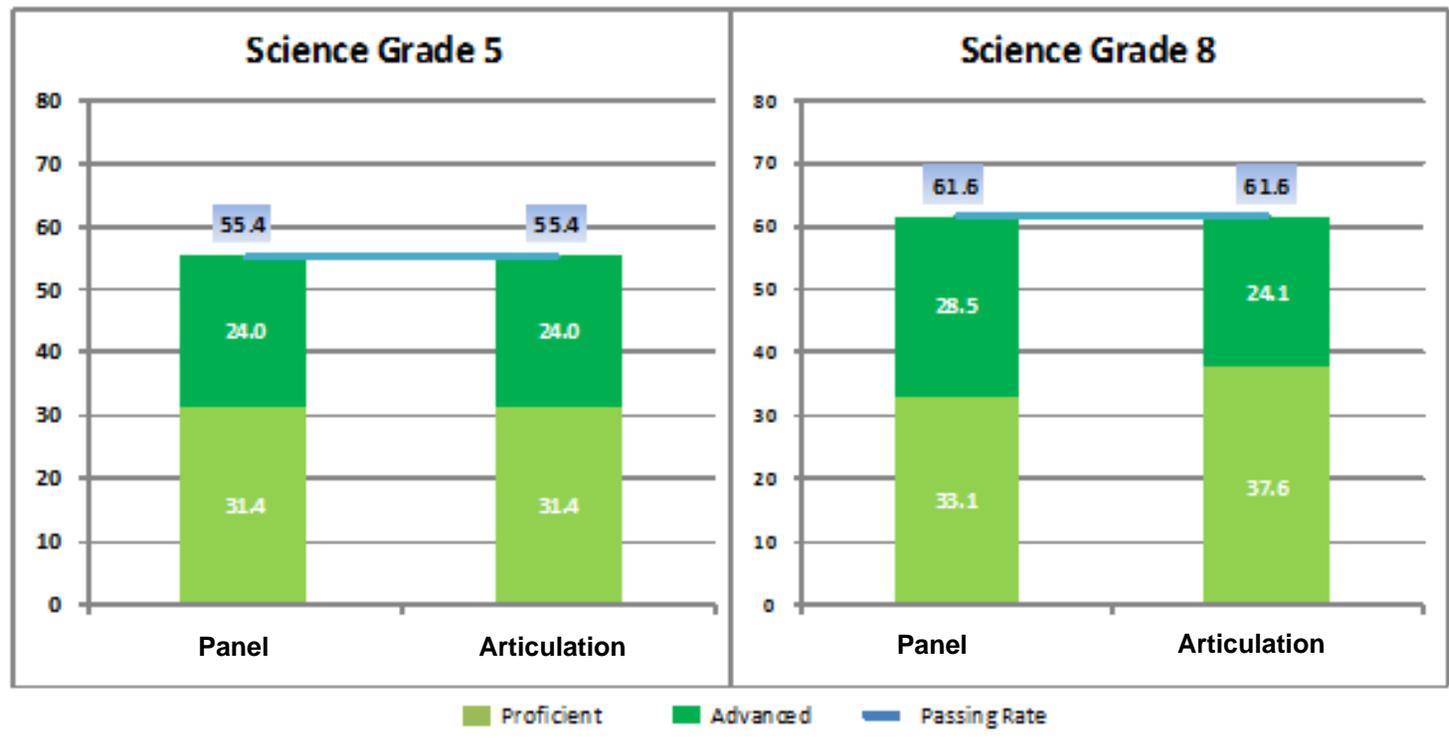
ROUND 3: Groups had Percent at Each Level information

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Summary of Recommendations from Grade-level & Articulation Panels: **Meeting/Exceeding Standard**

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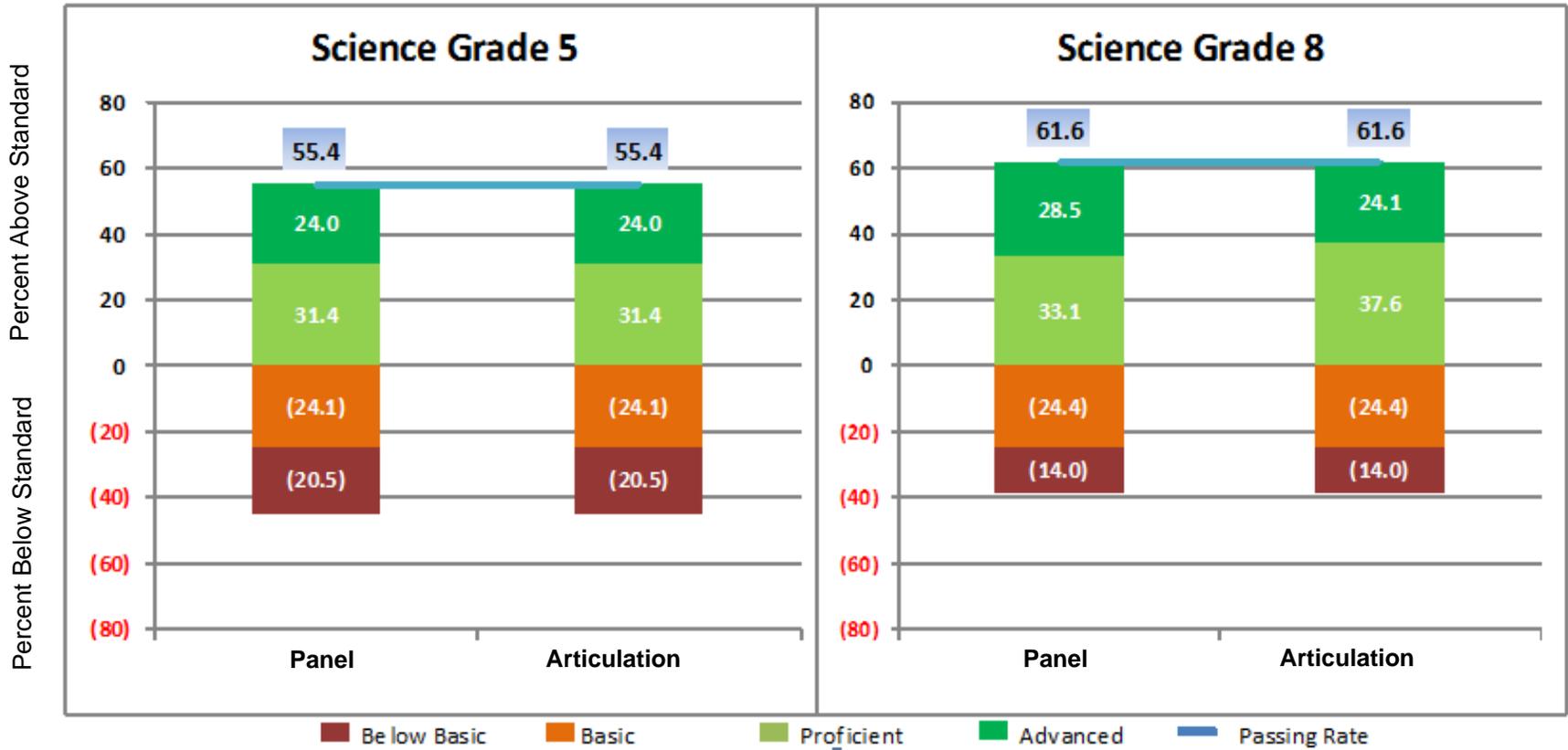


	Grade 5	Grade 8
2010 MSP	34.0	54.5
2011 % Met	55.4	61.6



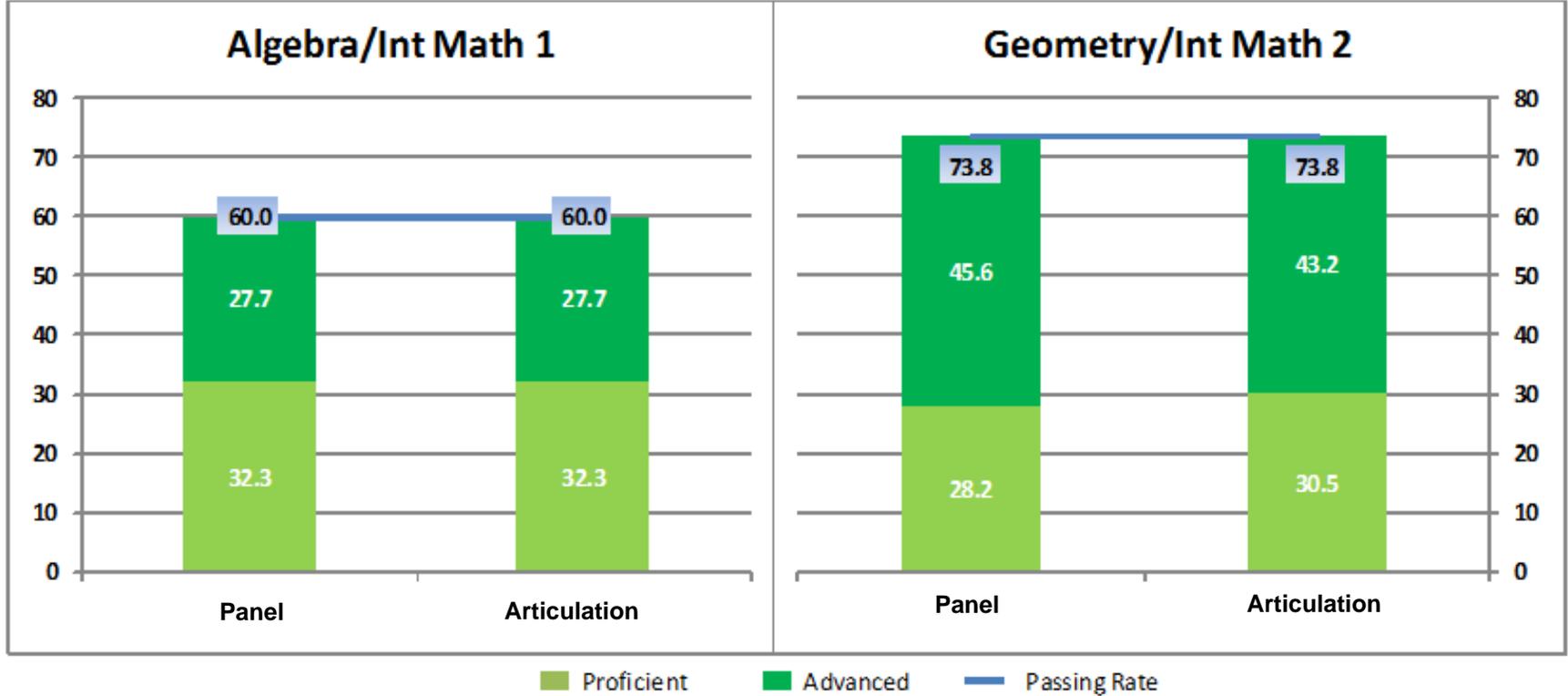
Summary of Recommendations from Grade-level & Articulation Panels: **All Four Levels**

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Summary of Recommendations from Course-level & Articulation Panels: **Meeting/Exceeding Standard**

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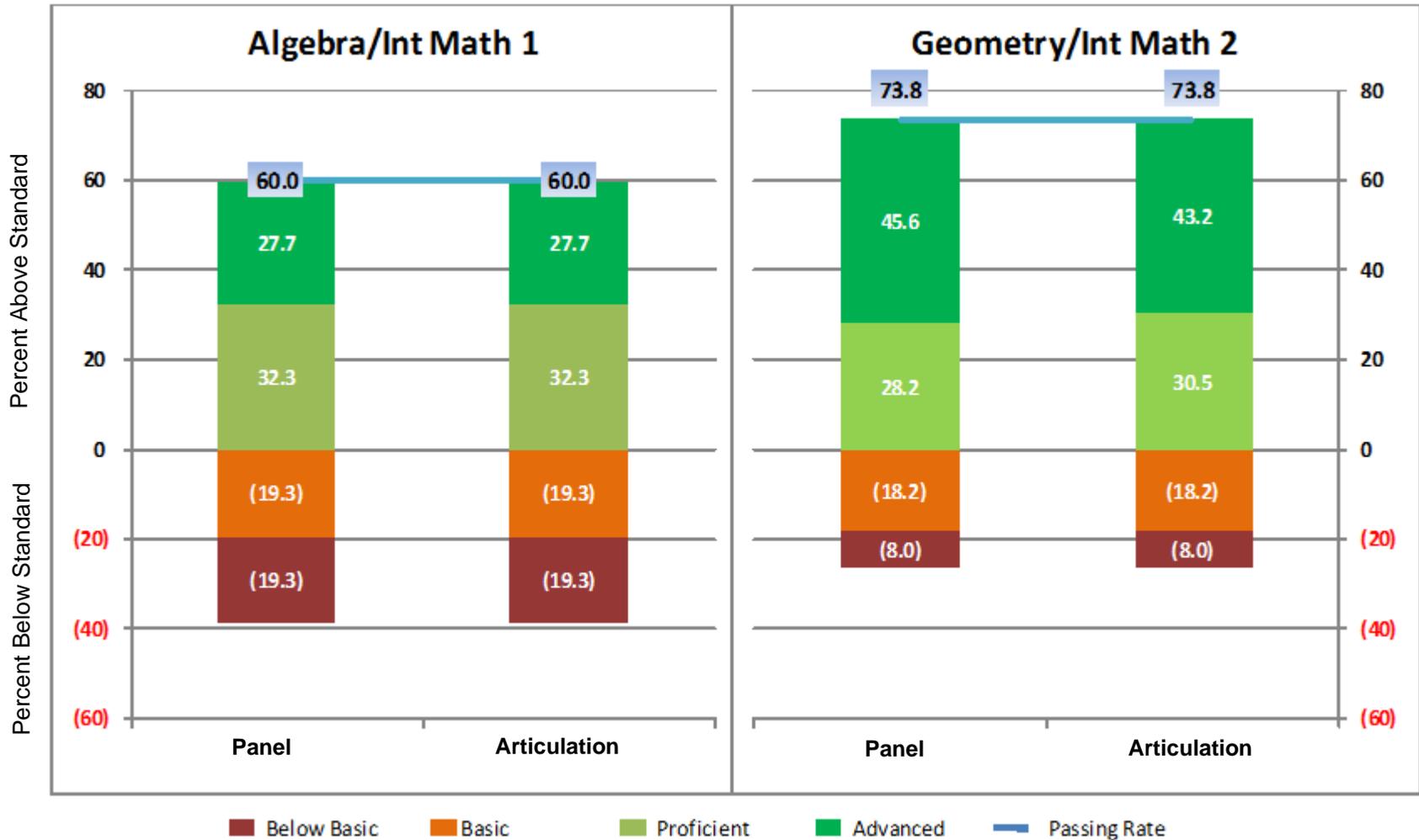


	Year 1 EOC	Year 2 EOC
2010 HSPE	41.7	
2011 % Met	60.0	73.8



Summary of Recommendations from Course-level & Articulation Panels: **All Four Levels**

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Superintendent's Recommendation

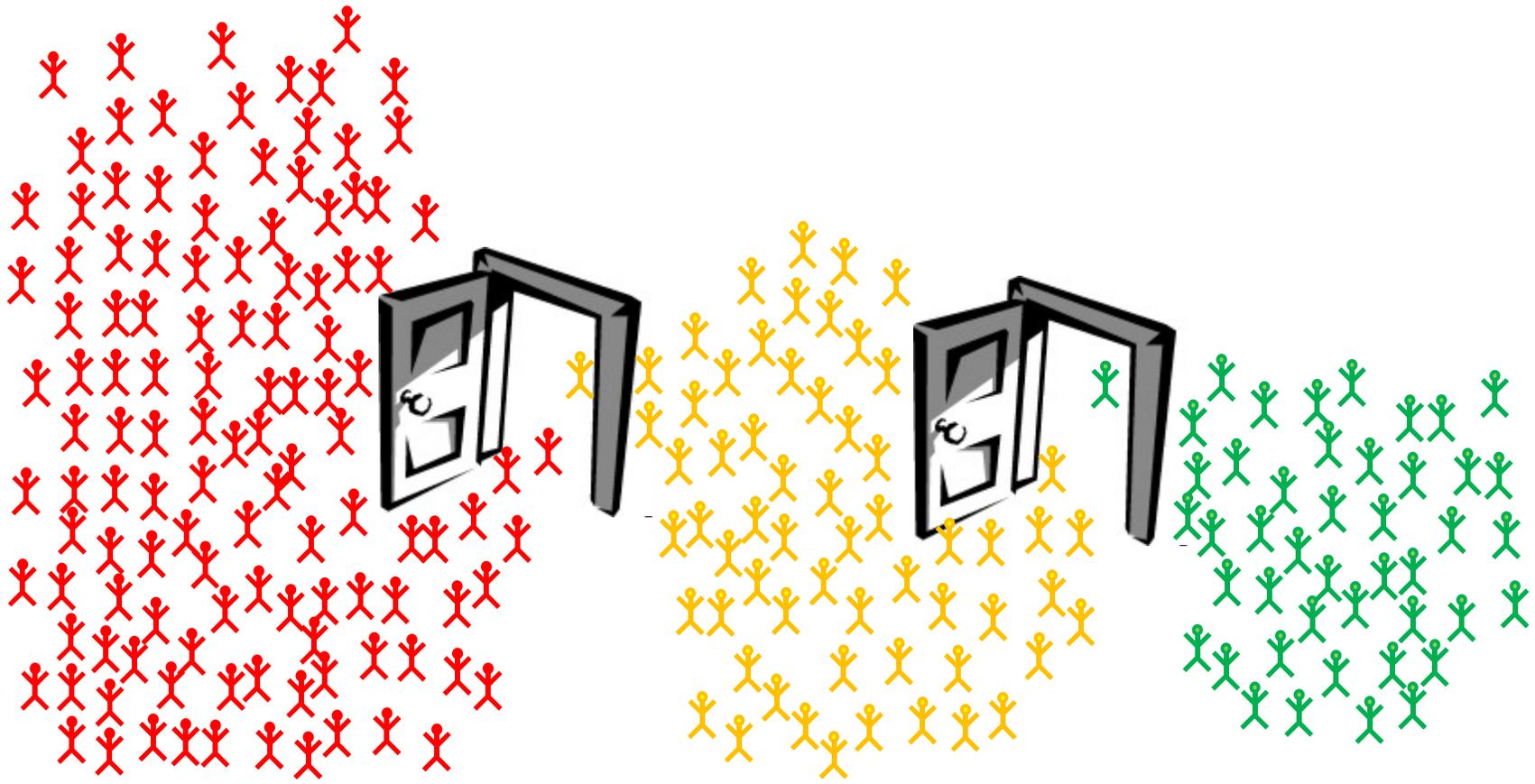
Superintendent Dorn's recommendation for a Board motion that...

...the State Board of Education adopt the cut scores for Basic, Proficient, and Advanced on the grades 5 and 8 Science Measurements of Student Progress and for the Year 1 and Year 2 End of Course Exams in Mathematics as forwarded by the Articulation Panel and the Policy Advisory Panel.



Do new pass rates make sense?

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100 students –
60% pass Alg EOC

60 students in Geom –
75% pass Geo EOC

45 students pass both –
HSPE pass was 42%



Superintendent's recommendation for raw score cuts: Basic, Proficient, and Advanced

Recommended Cut Scores

	Science		Mathematics	
	Grade 5	Grade 8	Year 1	Year 2
Advanced/ Proficient	27	32	23	26
Proficient/ Basic	21	23	15	18
Basic/ Below Basic	16	15	11	12
Total Points on Test	34	40	40	40

