

UNDERSTANDING EXAM DEVELOPMENT

Tim Miller, P.E.,

NCEES Director of Exam Services

Overview

- Identify NCEES exams.
- Review exam development process.
- Define psychometric terms.

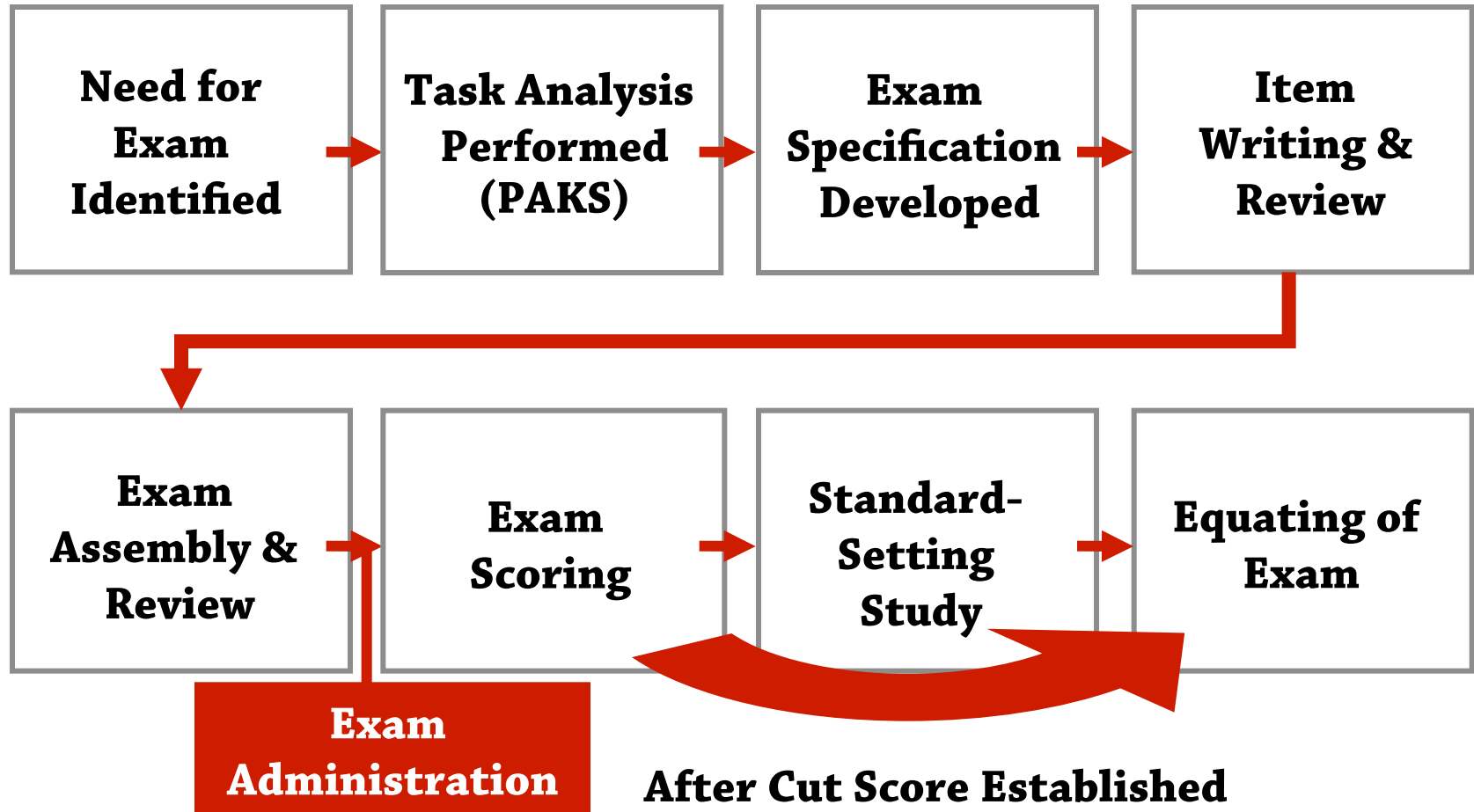
NCEES Exams

- Fundamentals exams
 - Fundamentals of Engineering (FE)
 - Fundamentals of Surveying (FS)
- Principles and Practice exams
 - 15 Principles and Practice of Engineering (PE) exams with 5 options for Civil, 3 for Electrical, 3 for Mechanical
 - New Software Engineering exam offered in 2013
 - Principles and Practice of Surveying (PS)
- Structural Engineering (SE) exams

NCEES Exams


- All exams are multiple choice and 8 hours except SE
- FE exam has 180 questions (moving to CBT)
- FS exam has 170 questions (moving to CBT)
- PS and PE exams have 80 to 100 questions
 - PS is 6 hours plus a 2-hour state-specific exam
- SE exam has two 8-hour components (multiple choice and constructed response)
 - Vertical Forces and Lateral Forces

Exam Development Process Overview



Exam Development Process Overview

**Need for
Exam
Identified**



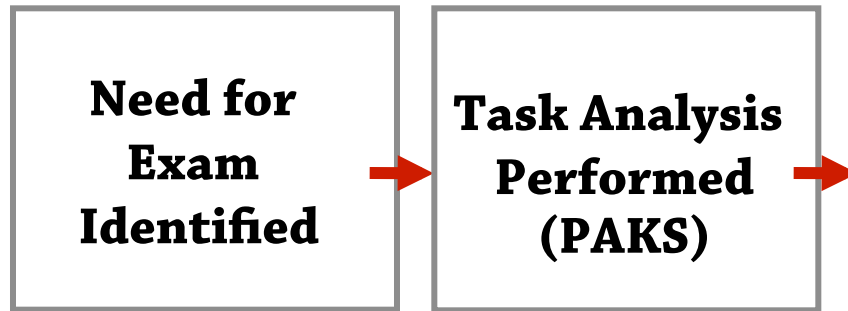
Need for Exam or Module Identified

- Request by no fewer than 10 member boards
 - Proof of need
 - Estimate of usage
 - Impact on health, safety, and welfare
 - Is not adequately tested by an existing exam
- Must be at least one EAC/ABET program
- Initially in partnership with a technical society

Need for Exam or Module Identified

- Once NCEES receives letters from 10 member boards and sponsoring technical society, EPE Committee is charged to perform due diligence and make a recommendation to the board of directors.
- Due diligence includes verifying information received and polling remainder of member boards to ascertain
 - If they will offer the exam if it is developed
 - The number of potential takers
- If EPE Committee recommends development and the board of directors approves, the PAKS is performed.

Exam Development Process Overview



Professional Activities and Knowledge Study (PAKS)

- Committee structure
 - Diversified group of licensed engineers
 - Age
 - Gender
 - Geographic location
 - Practice size
 - Years of practice
 - Ethnicity

Professional Activities and Knowledge Study (PAKS)

- Survey structure
 - A list of tasks, knowledges, and skills that the committee feels may be important to the safe practice of their profession at the time of licensure
 - Survey generated based on the task statements and important knowledges and skills from above and will be rated by survey respondents

Professional Activities and Knowledge Study (PAKS)

- Population to be surveyed
 - Licensed engineers with knowledge of examinee population
- Respondents rate each task statement and knowledge area.

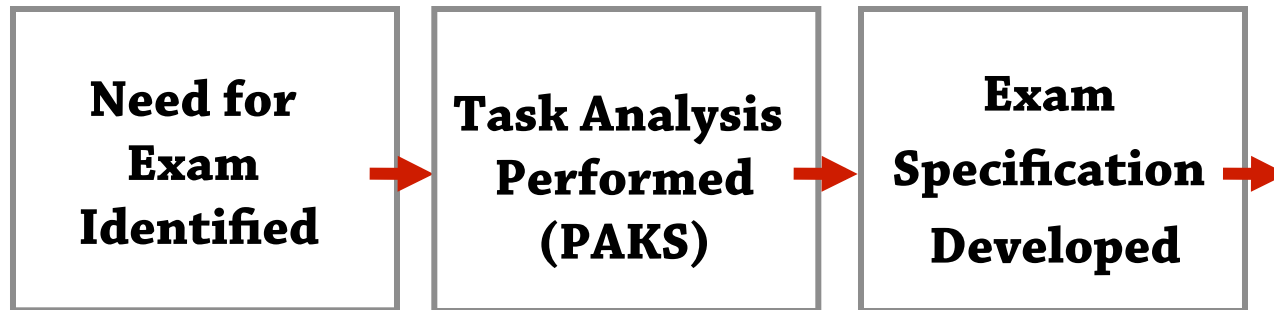
“At the time of licensure, how important is the competent performance of each of these in protecting the health, safety, and welfare of the public?”

 1. Of No Importance
 2. Of Minor Importance
 3. Important
 4. Very Important
 5. Extremely Important

Professional Activities and Knowledge Study (PAKS)

- Importance of demographics
 - Allows grouping of data for analysis
- Analysis report
 - Survey results are analyzed by the psychometrician and reviewed during the specification development meeting.

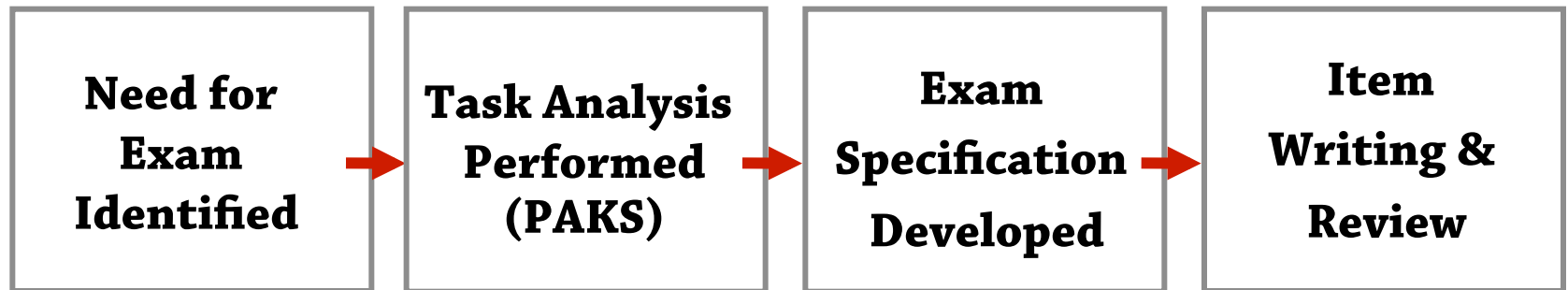
Exam Development Process Overview



Specification Development

- Specification Development Committee
- Based on analysis report
- Identification of knowledge areas
 - Passing list (2.5 and above)
 - Borderline list (2.4 to 2.5), may be included if strong rationale
 - Failing list (less than 2.4)
- Appropriately grouped into subcategories (evaluated for potential breadth-and-depth exam)
- This process establishes the “defensible link.”
- Submit specification to the EPE Committee for approval.
- If it is a new Group II exam, the Group II exam agreement must be executed between NCEES and the technical society at this time.

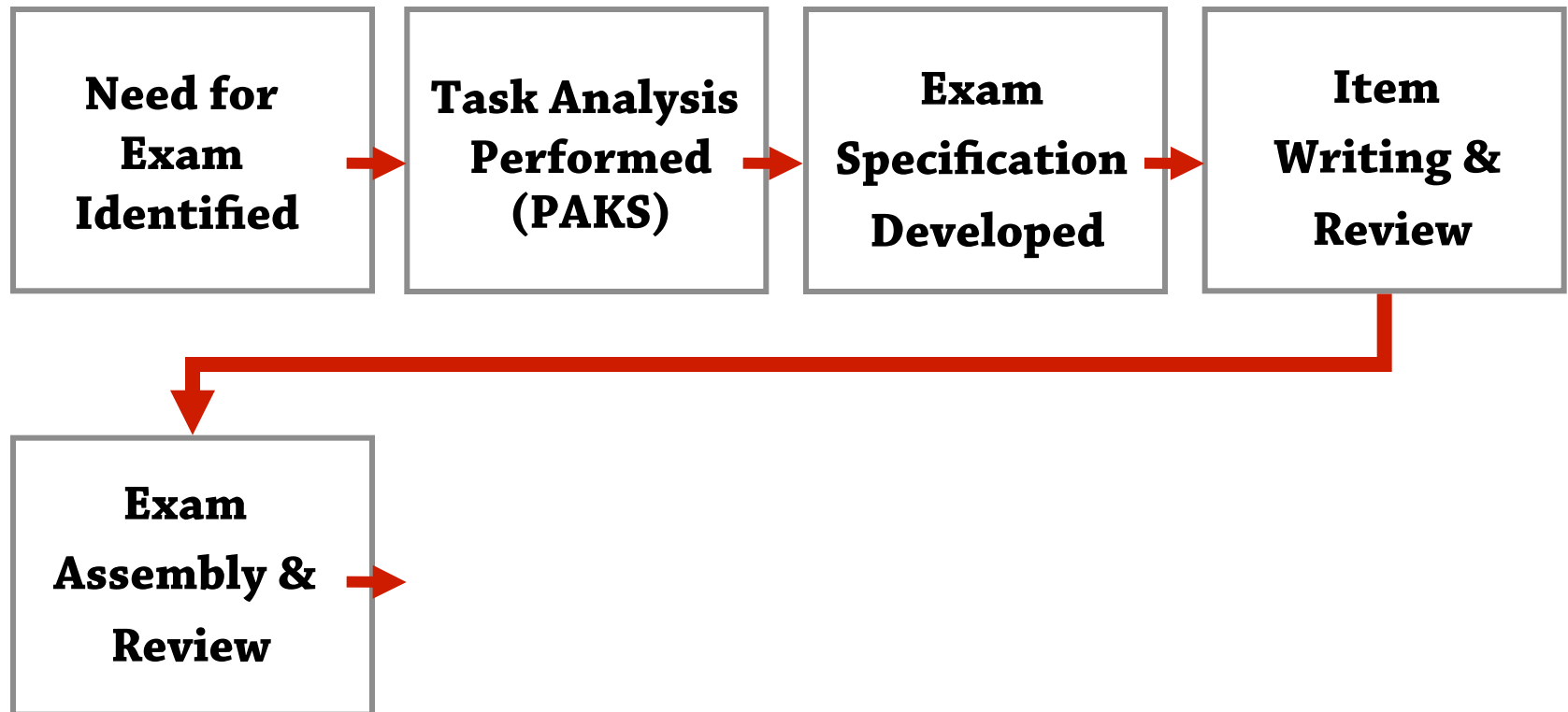
Exam Development Process Overview



Item Writing and Review

- Ongoing process
- Sources of item writers
- Training
- Item submittal form
 - Signed release
- Subject-matter expert (SME) review
 - Appropriateness of content
 - Time to solve
 - Solution and key
 - Rationale for distracters

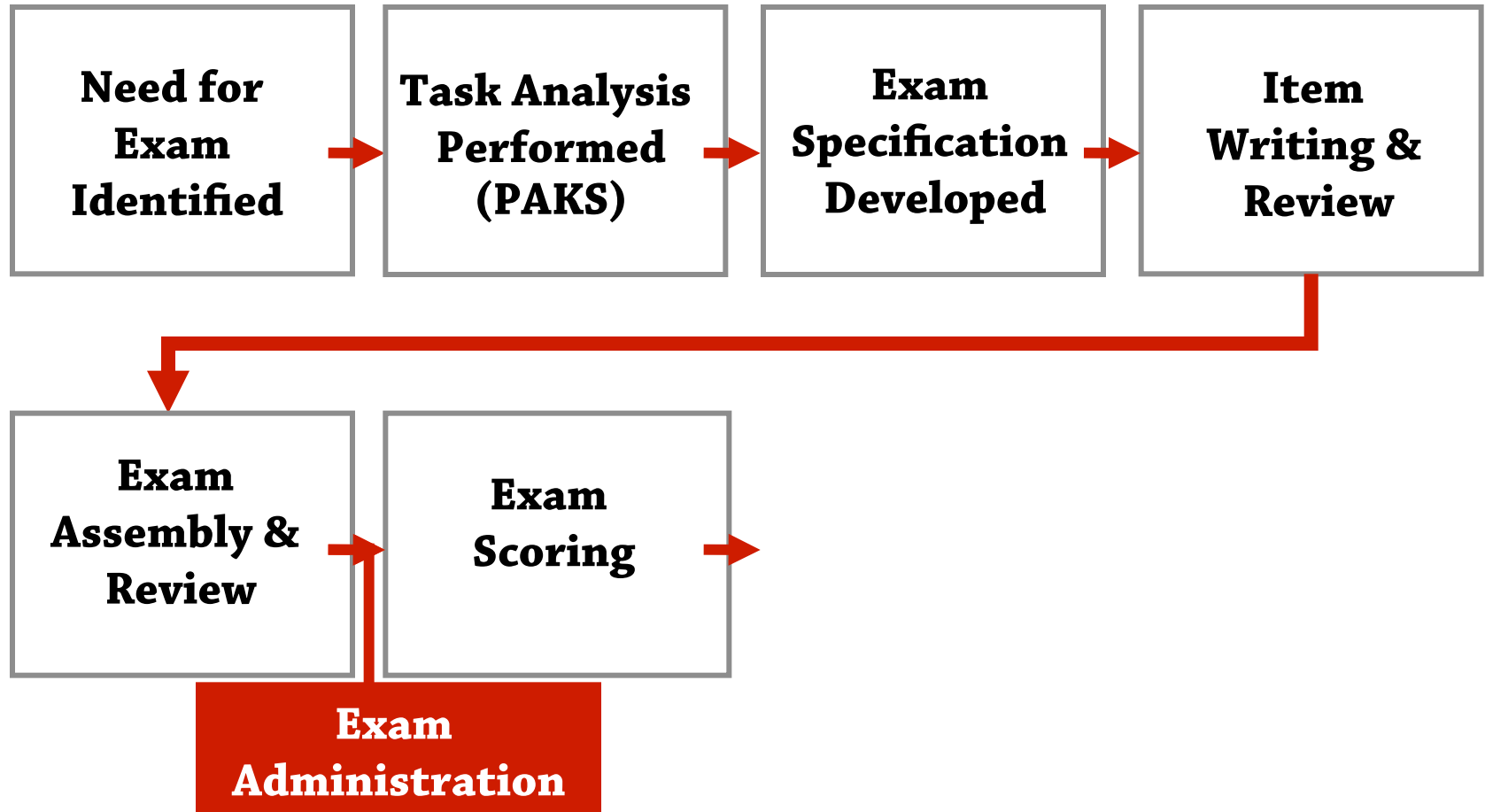
Exam Development Process Overview



Exam Assembly and Review

- Item bank
- In accordance with the specification
- SME and committee review
 - Validity/adherence to specification
 - Content overlap
 - Bad pairs
- Timed pre-test

Exam Development Process Overview



Examinee Management System (EMS)

- Once qualified by their state board, all candidates now register with NCEES.
- There is now a common, simplified answer sheet for all exams.
- Biographical information previously captured on the answer sheets is now entered into EMS at registration.
- Candidate validates information in EMS.
- Answer sheet reconciliation has been greatly improved.

Exam Scoring

- Return of answer sheets
- Scanning of answer sheets
- Statistical analysis (PIA)
 - Difficulty
 - Discrimination
 - Flagged items (PIA)
- Examinee comments
- SME review
- Key validation
- Apply a passing score

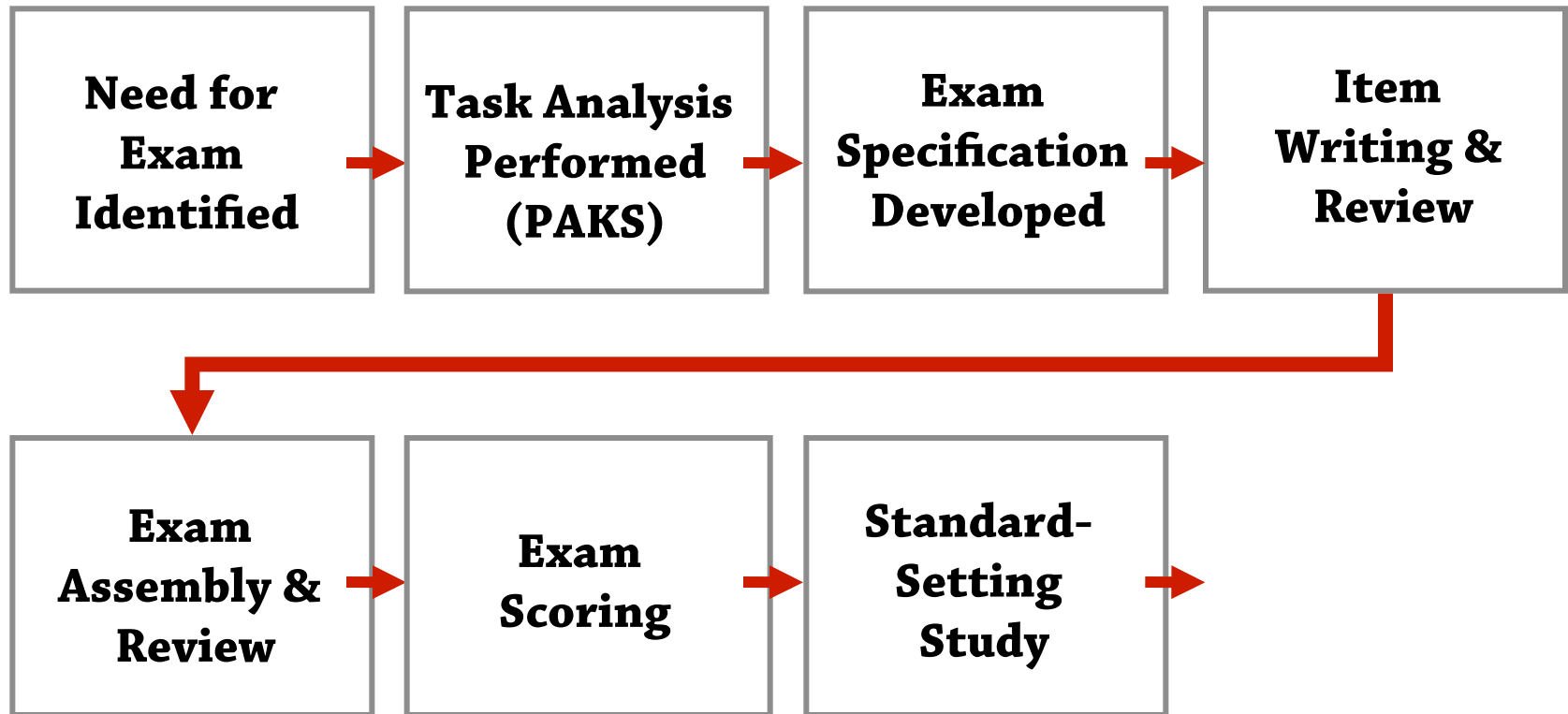
Scanning Answer Sheets

- 75,000 to 90,000 answers sheets scanned every administration
- Digital scanner—average of 90 sheets per minute, scans both sides at the same time and creates a digital image
- Error checking processes used
 - Find unmatched a.m./p.m. forms
 - Find miscellaneous errors

Preliminary Item Analysis (PIA)

- Representative sample of answer strings (100 minimum) sent to psychometrician.
- PIA “flags” items that perform poorly.
- SMEs review flagged items and examinee comments.
 - Possible outcomes: verify key, change key, or multikey.
- Final keys validated for scoring.

Exam Development Process Overview



Standard-Setting Study

- The passing score is determined in one of two ways.
- For the first administration of a new exam or specification change (the anchor exam), a cut-score panel recommends the score.
- For subsequent administrations, a statistical procedure known as “equating” is used to set the score relative to the anchor exam.

Standard-Setting Study

- A panel (minimum 10 people) is selected as follows:
 - 1/3 to 1/2 licensed within last 5 years
 - Diverse with respect to geographical location, practice area, gender, age, and ethnicity
- Online training given to cut-score panel and approval subcommittee prior to cut-score meeting.
- Panel develops a standard of minimal competence.
- Panel takes the exam in test-like conditions and individually estimate the proportion of minimally competent examinees that they feel will answer each item correctly.

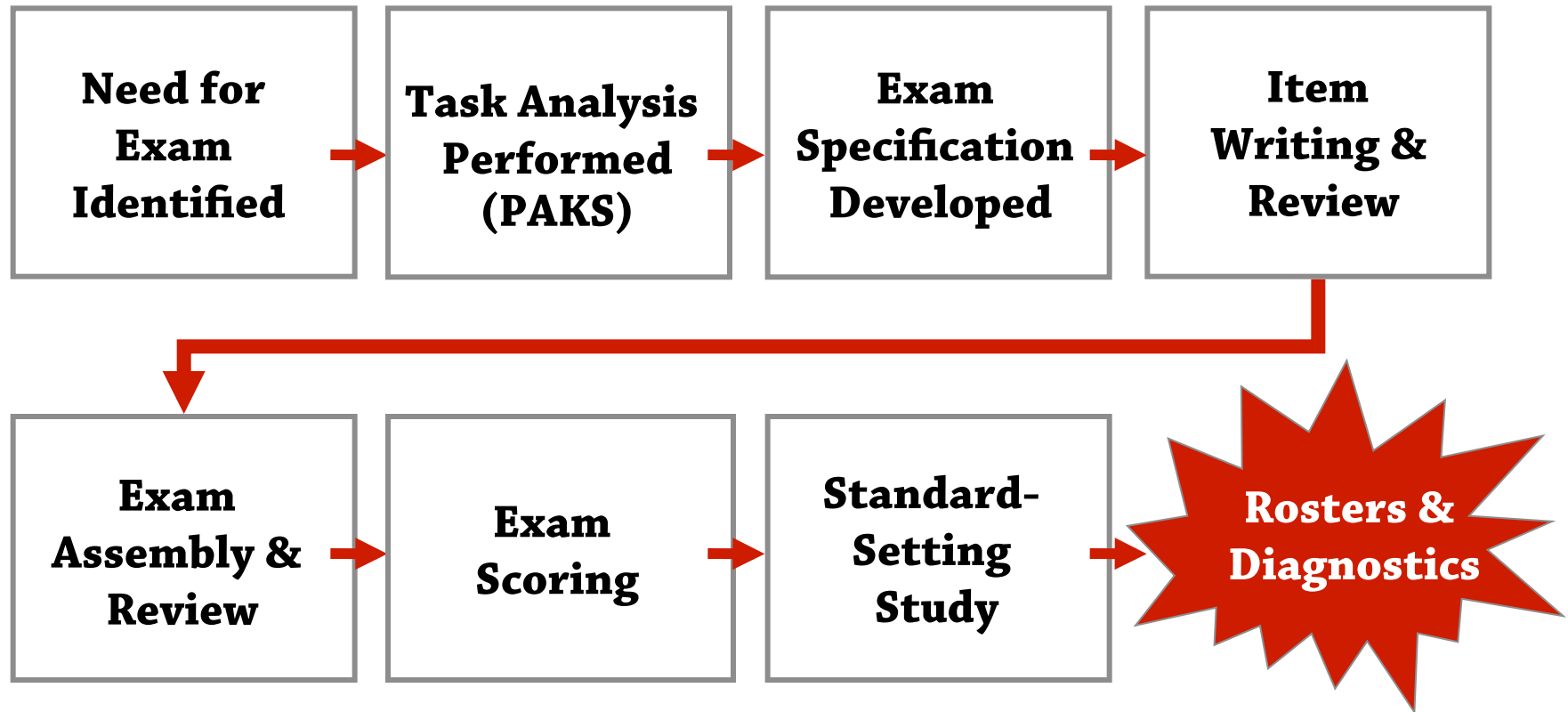
Standard-Setting Study

- The panel discusses the difficulty level of each question and adjusts the rating if necessary.
- Panelists also offer their opinions of the expected pass rate among first-time takers.
 - The average of the panelists' expected pass rates is called the Beuk adjustment.
- The testing consultant analyzes all the data and statistically establishes a panel-recommended cut score (passing score).

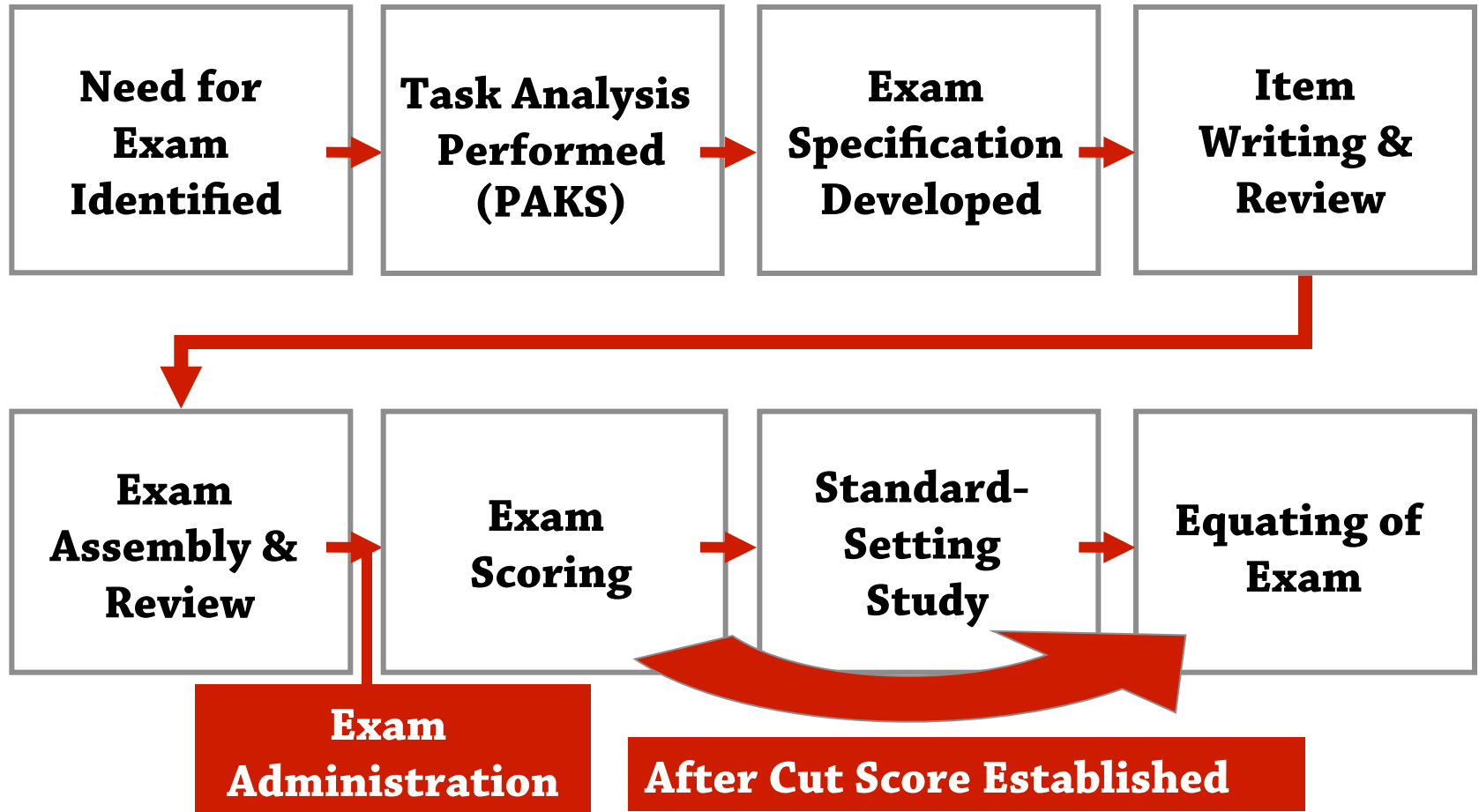
Standard-Setting Study

- The testing consultant also determines alternate cut scores representing up to three standard errors of judgment above and below the recommended cut score.
- A cut-score subcommittee is established for the anchor exam:
 - Chair and vice chair of EPE/EPS committees
 - Chair and two members of the exam committee
 - Exam Audit Committee representative (non-voting member)
 - NCEES Director of Exam Services or staff designee (non-voting member)
- Subcommittee selects the most appropriate cut score based on panel's work and history of the exam.

Exam Development Process Overview



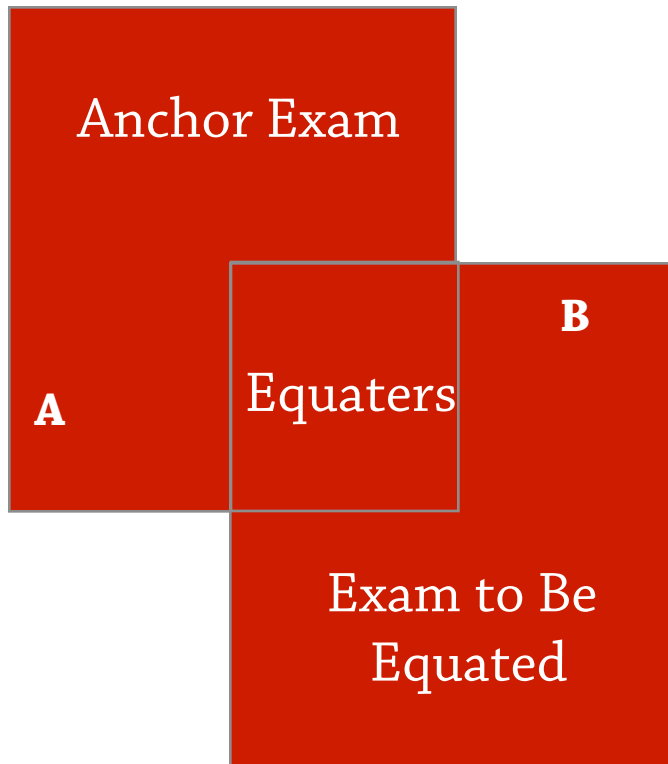
Exam Development Process Overview



Equating of Examination

- Psychometrically proven method of determining the passing score
- Saves the expense of convening a cut-score panel every six months
- Preserves the same passing standard as the anchor exam
- Ensures that examinees are not penalized or rewarded if the exam taken is more or less difficult than the anchor exam
- After the anchor exam, the testing consultant produces an equating report and equating handbook, identifying questions that are to be used on future exams as equaters.

Equating Explained



- Test within a test (20–25%)
- Representative of content
- Representative of difficulty
- Items with known statistics
- Controlled placement
- Performance provides information
- Minimum volume of examinees

Equating

- Equating items normally have a $R_{bis} > 0.25$ and a $P+$ between 0.40 and 0.90.
- The mean $P+$ of the selected equaters must be within ± 0.01 of the anchor exam.
- The standard deviation of the mean $P+$ of the selected equaters must be within ± 0.02 of the anchor exam.
- Equating items may not be modified, and they must be in the same location on the exam.
- The testing consultant compares the two populations (based on how examinees perform on the equating questions versus the rest of the exam) and determines the passing score relative to the anchor exam.

Equater Effect

- Exam B is equated to exam A.
- Sixteen questions from exam A were used as equaters on exam B.

Exam	Mean Score on Exam (out of 80)	Mean Score on Equaters (out of 16)	Cut Score	Passing % (first-time takers)
A	39.85	8.05	37	63%
B	45.99	8.19	42	64%

Questions So Far?

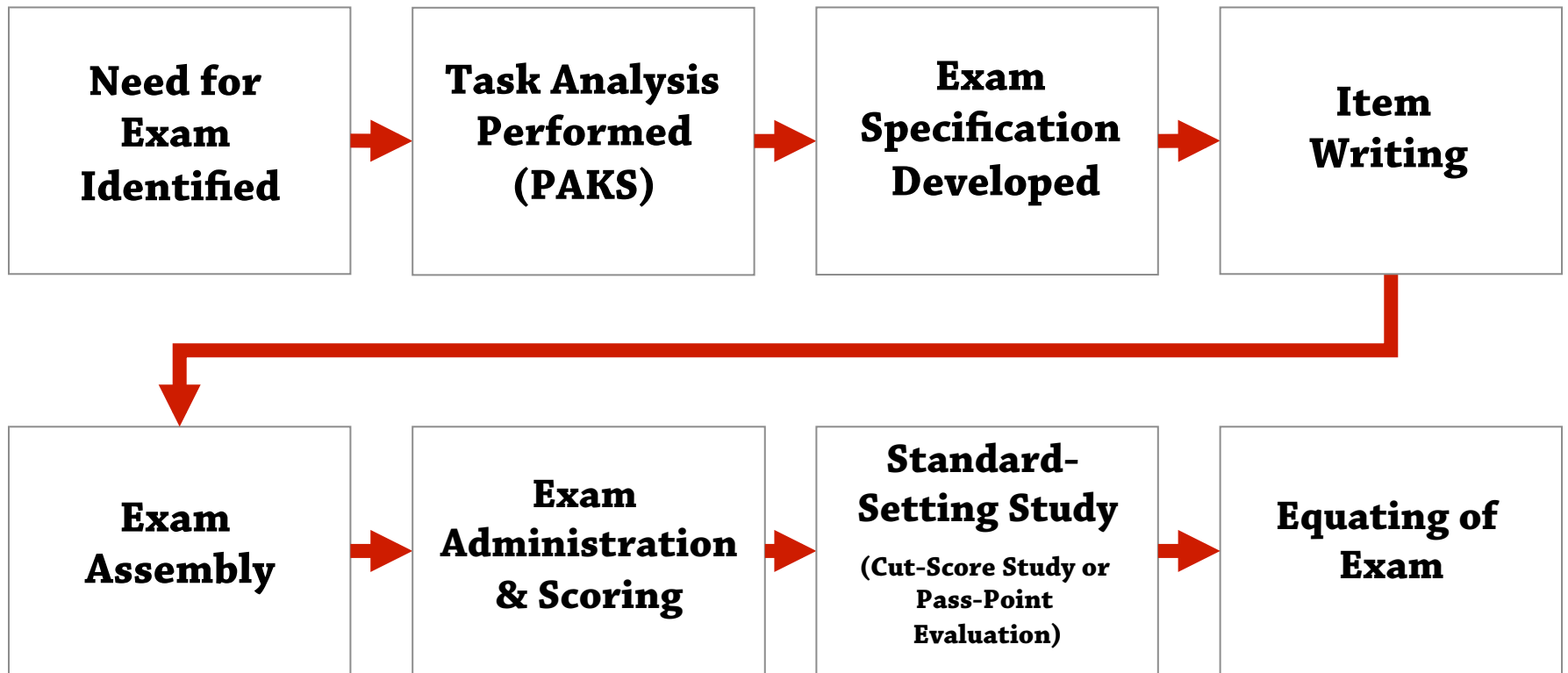
10-Minute Break

The Psychometric Process

The Psychometric Process

- Psychometrics is the field of study concerned with the theory and technique of psychological measurement, which includes measurement of knowledge and abilities.
- Psychometrics are used by NCEES as a measurement of exam performance.
- To understand the psychometric process, you must first understand where it fits in the overall exam development process.

Exam Development Process Overview



Exam Administration and Scoring

- Exam administration
 - Preliminary Item Analysis (PIA) review
 - Examinee comments
 - Final keys
- Scoring
 - Cut scores
 - Equating

Preliminary Item Analysis (PIA)

- A PIA is performed by the testing consultant on a sample of the scores, and items are flagged that might have potential problems and need resolution before releasing scores to member boards.
- Subject-matter experts (SMEs) review the flagged items before final keys are released to scoring.
- Examples of flagging criteria include:

PIA Flags

<u>Term</u>	<u>Definition</u>
H	$P_+ < 0.25$
B	$R_{bis} < 0.10$
K	When a distracter has a high percentage of examinees selecting it rather than the key

P+ Definition

- P+ is a statistic used to show the percentage of examinees who chose the correct answer.
- P+ ranges from 0.00 (no one answered correctly) to 1.00 (everyone answered correctly).
- An item will flag (PIA) when $P+ < 0.25$. Since each item has four options, guessing on an item gives a 25% chance of getting the right answer. If P+ is < 0.25 , something could be wrong with the item, so it is reviewed by an SME.
- When reusing items on new exams, we use $0.40 < P+ < 0.90$ (FIA–Total) as a guideline.

Rbis Definition

- Rbis is a correlation statistic used to estimate the degree of the relationship between how examinees performed on an individual item versus how they performed on the overall exam.
- Rbis will vary from -1 to $+1$, where $+1$ shows the strongest correlation that the people who scored the highest on the entire exam picked the correct answer on this item while the people who scored the lowest on the exam did not.

Rbis Definition

- The examinees are divided into three groups in relation to their overall exam scores:
 - Lower third (Group A)
 - Middle third (Group B)
 - Upper third (Group C)
- Each item is evaluated to determine the percentage of each group versus each answer.
- Ideally, Group A will have the lowest percentage choosing the correct answer, then Group B. Group C will have the highest percentage.

Rbis Definition

- This will result in a positive Rbis. The greater the difference, the higher the Rbis.
- If Group A > Group B > Group C, a negative Rbis is the result.
- An item will be flagged on the PIA when $Rbis < 0.10$. This means it does not discriminate well. We would like the people who do well on the exam overall to do better on each individual question than people who don't do as well.
- When reusing items, we use $Rbis > 0.25$ (FIA–Total) as a guideline.

Examples

Good P+, Good Rbis

Number of Cases	1.0											
503												
Mean (P+)												
0.74												
Delta												
10.43												
Pearson												
0.28												
Biserial												
0.38												
Mean of Passers	Alt.	Lowest	Low	Medium	High	Highest	%	N	Mean Scr	Biserial		
0.84	1	0.10		0.07		0.02	6.2%	31	36.0	-0.32		
	2	0.18		0.11		0.07	12.1%	61	38.3	-0.25		
Mean of Failers	3*	0.60		0.73		0.89	74.0%	372	44.4	0.38		
0.63	4	0.11		0.08		0.03	7.6%	38	38.4	-0.22		
	OM	0.01		0.00		0.00	0.2%	1	24.0	-0.56		
Mean Near Cut												
0.73	Mn Scr	31.73		41.88		54.46						
	Grp N	169		166		168						
Phi												
0.24												
DIF Grade												

Good P+, Poor Rbis

Number of Cases	1.0		0.9		0.8		0.7		0.6		0.5		0.4		0.3		0.2		0.1		0.0		Biserial ($r < 0.10$)
517																							
Mean (P+)																							
0.58																							
Delta																							
12.17																							
Pearson																							
-0.05																							
Biserial																							
-0.06																							
Mean of Passers	Alt.	Lowest	Low	Medium	High	Highest	%	N	Mean Scr	Biserial													
0.55	1	0.15		0.15		0.20	16.4%	85	50.6	0.07													
	2*	0.62		0.58		0.54	58.2%	301	49.1	-0.06													
Mean of Failers	3	0.08		0.07		0.07	7.2%	37	48.4	-0.06													
0.64	4	0.16		0.20		0.19	18.2%	94	50.2	0.05													
	OM	0.00		0.00		0.00	0.0%	0															
Mean Near Cut																							
0.59	Mn Scr	38.86		50.03		61.14																	
	Grp N	186		170		161																	
Phi																							
-0.09																							
DIF Grade																							

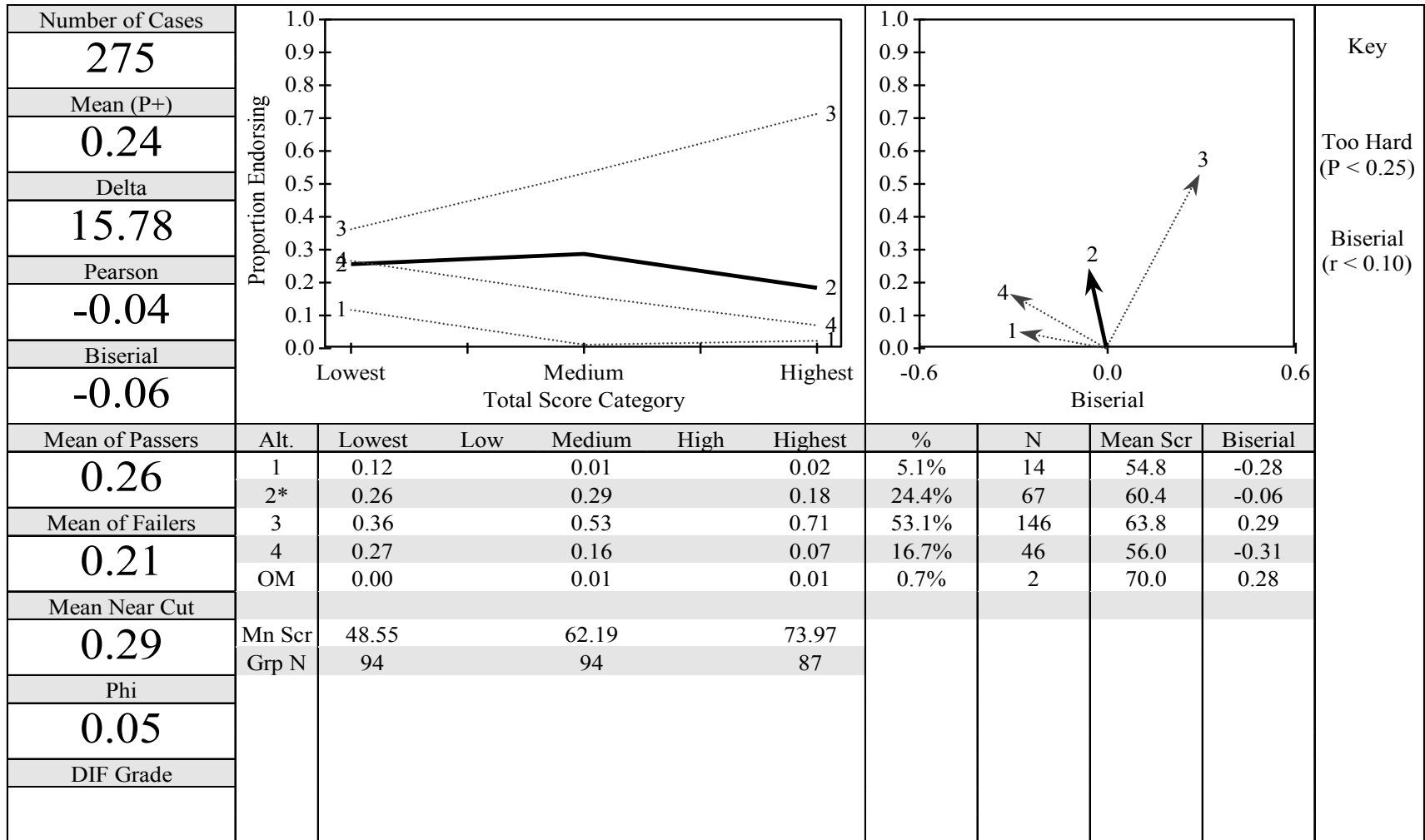
Bad P+, Good Rbis

Number of Cases										
Mean (P+)										
Delta										
Pearson	Too Hard (P < 0.25)									
Biserial	Too Hard (P < 0.25)									
Mean of Passers	Alt.	Lowest	Low	Medium	High	Highest	%	N	Mean Scr	Biserial
0.25	1	0.25		0.26		0.22	24.4%	160	41.9	-0.09
	2	0.36		0.33		0.23	30.9%	203	41.5	-0.14
Mean of Failers	3	0.29		0.30		0.16	25.2%	165	40.7	-0.18
0.10	4*	0.08		0.11		0.38	18.4%	121	51.5	0.51
	OM	0.01		0.01		0.01	1.1%	7	41.7	-0.05
Mean Near Cut										
0.12	Mn Scr	31.37		42.82		56.65				
	Grp N	224		227		205				
Phi										
0.19										
DIF Grade										

K Definition

- When the exam mean score of examinees selecting a distracter is higher than the exam mean score of examinees selecting the key, and the number of people who selected the distracter is at least half the number of people who selected the key, the item will be flagged.
- This is an indication that the item may be miskeyed or the distracter might also be a correct answer.
- An SME evaluates the flagged item during the PIA process.
- Here's an example:

Example of Potential Miskeyed Item



Non-Discriminating Items

- Items that are too easy or too difficult do not discriminate between those who are minimally competent and those who are not.
- Here are two examples:

Number of Cases					Biserial ($r < 0.10$)					
277										
Mean (P+)										
0.92										
Delta										
7.26										
Pearson										
0.04										
Biserial										
0.08										
Mean of Passers	Alt.	Lowest	Low	Medium	High	Highest	%	N	Mean Scr	Biserial
0.91	1	0.03		0.03		0.07	4.3%	12	48.8	-0.02
	2	0.03		0.03		0.02	2.9%	8	46.5	-0.10
Mean of Failers	3*	0.93		0.93		0.91	92.4%	256	49.4	0.08
0.94	4	0.01		0.00		0.00	0.4%	1	37.0	-0.34
	OM	0.00		0.00		0.00	0.0%	0		
Mean Near Cut										
0.93	Mn Scr	36.60		48.95		62.99				
	Grp N	96		91		90				
Phi										
-0.04										
DIF Grade										

Number of Cases										<p>Key</p> <p>Too Hard ($P < 0.25$)</p> <p>Biserial ($r < 0.10$)</p>	
Mean (P+)											
Delta											
Pearson											
Biserial											
Mean of Passers	Alt.	Lowest	Low	Medium	High	Highest	%	N	Mean Scr		Biserial
	1	0.00		0.20		0.40	20.0%	3	48.3		0.20
	2	0.60		0.20		0.00	26.7%	4	34.8	-0.91	
Mean of Failers	3*	0.00		0.00		0.00	0.0%	0			
	4	0.40		0.60		0.60	53.3%	8	50.0	0.61	
	OM	0.00		0.00		0.00	0.0%	0			
Mean Near Cut											
	Mn Scr	35.80		45.80		55.20					
	Grp N	5		5		5					
Phi											
DIF Grade											

Examinee Comments

- Comments submitted by examinees after the exam are reviewed by the appropriate exam development engineer (EDE) and forwarded to SMEs, as necessary, for additional review, comment, or action.

Final Keys

- Once all PIA items and examinee comments have been resolved, the final keys are given to the NCEES scoring group and the psychometrician.
- Scoring is then completed, and once the passing score has been set, candidate rosters are released.

Questions on Psychometrics?

Grading Constructed-Response Questions for the SE Exam

Before the Grading Session

- Each component has 3 bridge questions and 4 building questions for a total of 14 questions that must be graded.
- As each item is developed, scoring criteria and a grading table are developed and refined before grading. Here are examples of the scoring criteria and a grading table:

SCORING CRITERIA

Control No. _____

The following are important criteria relevant to the demonstration of competency for this problem.

Requirement (a):

1. Checks appropriate load combinations and determines governing combination.
2. Calculates tributary area for mezzanine and roof.

Requirement (b):

3. Uses appropriate KL value.
4. Determines appropriate axial and flexural capacity of column.
5. Calculates second order effects.

Requirement (c):

6. Checks adequacy of bolts.
7. Checks adequacy of single plate.
8. Checks adequacy of weld.
9. Checks limit state of HSS wall thickness.

Requirement (d):

10. Identifies at least 4 appropriate considerations

Scores:

4 points: Any 8 of 10 items must be substantially correct and item 5 must be correct.

3 points: Any 6 of 10 items must be substantially correct.

2 points: Any 4 of 10 items must be substantially correct.

1 point: Any 2 of 10 items must be substantially correct.

0 points: Nothing to indicate substantial knowledge of the problem.

Problem 1204-601 Scoring Table			"Required Items" for each grade are indicated below				
Items ↓	No (x)	Yes (v)	4	3	2	1	0
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
Number of "Yes" items			Any 8/10	Any 6/10	Any 4/10	Any 2/10	Nothing significant presented
Sufficient "Required Items" correct? (Y or N)		NA					
Final Score: Circle Number to Right							

After grading, please place your GRADER STICKER in the allotted space below.

4 3 2 1 0

GRADER STICKER here

Before the Grading Session

- Each question is assigned a coordinator and helper, along with 7–8 scorers.
- The scorers review the question, solution, and scoring criteria before the grading session.
- The coordinator and helper for each question arrive the day before the grading session and look for questions that are good representatives of 0–4 scores.
- They select several examples to use for discussion, training, and certification.

During the Grading Session

Grading team members, led by the coordinator and helper, review the solution, scoring criteria, and grading table and make any final adjustments.



During the Grading Session

Scorers do not know whose exam they are grading. Names and jurisdictions of examinees are covered with a bar code sticker and unique ID.

Provide the information requested on every solution pamphlet you receive.

Item: 601

Examinee ID: 326987

Enter your 10-digit NCEES ID number as shown on your seat card.

Mark the one problem you are working in this solution pamphlet:

FRIDAY:	SATURDAY:
<input checked="" type="radio"/> Vertical—Buildings 601	<input type="radio"/> Lateral—Buildings 801
<input type="radio"/> Vertical—Buildings 602	<input type="radio"/> Lateral—Buildings 802
<input type="radio"/> Vertical—Buildings 603	<input type="radio"/> Lateral—Buildings 803
<input type="radio"/> Vertical—Buildings 604	<input type="radio"/> Lateral—Buildings 804
<input type="radio"/> Vertical—Bridges 701	<input type="radio"/> Lateral—Bridges 901
<input type="radio"/> Vertical—Bridges 702	<input type="radio"/> Lateral—Bridges 902
<input type="radio"/> Vertical—Bridges 703	<input type="radio"/> Lateral—Bridges 903

The **Buildings** exam has four solution pamphlets. The **Bridges** exam has three solution pamphlets. You may request additional solution pamphlets if you need them. You must submit **ALL** of your solution pamphlets to the proctor at the end of the exam.

WORK ONLY ONE PROBLEM IN EACH SOLUTION PAMPHLET.

Examinee:
Complete the information at the top of the page on **ALL** of the solution pamphlets given to you, even if you do not use them.

Proctor:
Collect **ALL** solution pamphlets distributed to examinees and return to NCEES.

STRUCTURAL ENGINEERING
PM solution pamphlet

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During the Grading Session

- Each question is independently graded by two scorers.
- If the grades agree or are off by no more than 1, the grade is “assigned” (averaged).
- If the grades are off by more than 1, the question is graded by the coordinator or helper for a third grade.

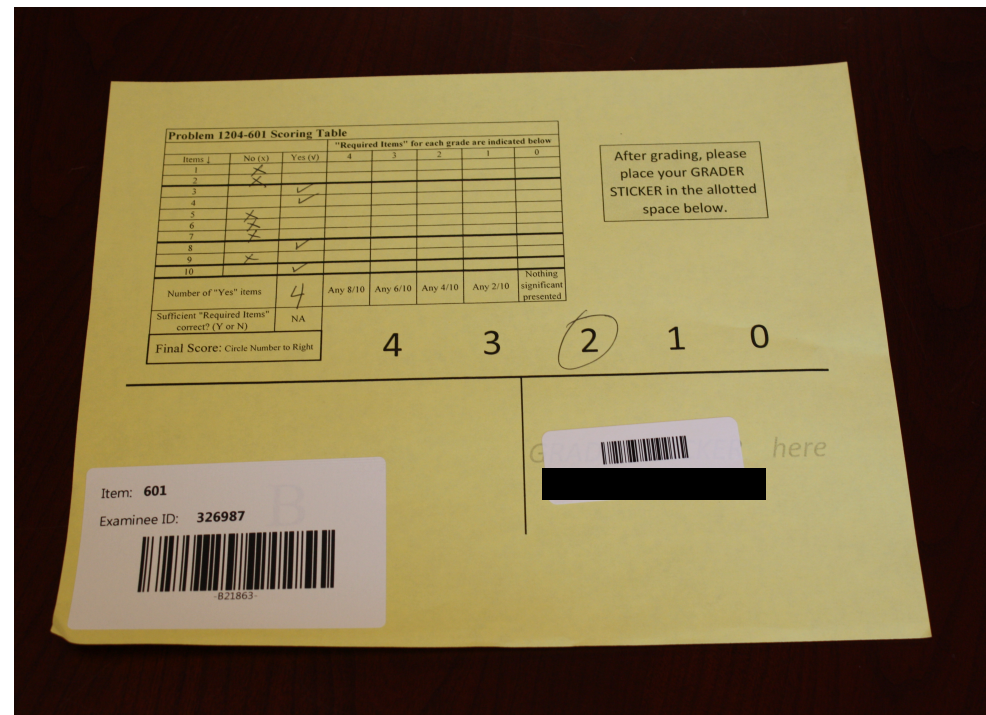
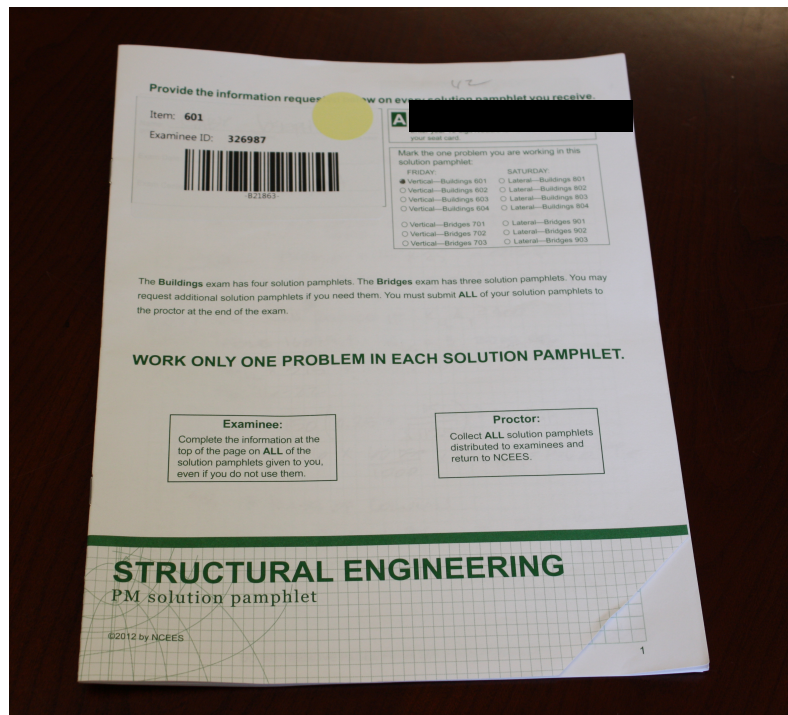
During the Grading Session

Scanning stations are operated by NCEES staff, who prepare the questions and enter the resulting grades into our database.



During the Grading Session

As each question is scanned into the system, a corresponding label is printed and placed on a grading sheet. Staff run the question and grading sheet to the grading room. The scorer grades the question, completes the grading sheet, and adds his or her identifying sticker.



During the Grading Session



During the Grading Session

When the question is returned, staff scan the examinee bar code and the scorer bar code, enter the grade, and prep the question for the second grade. The sticker shows the runner which scorer should not receive the question.

Problem 1204-601 Scoring Table

Items	No (N)	Yes (Y)	"Required Items" for each grade are indicated below					
			4	3	2	1	0	
1	X							
2								
3								
4								
5	X							
6	X							
7								
8								
9	X							
10								
Number of "Yes" items		5	Any 8/10	Any 6/10	Any 4/10	Any 2/10	Nothing significant presented	
Sufficient "Required Items" correct? (Y or N)		NA						
Final Score: Circle Number to Right			4	3	2	1	0	

After grading, please place your GRADER STICKER in the allotted space below.

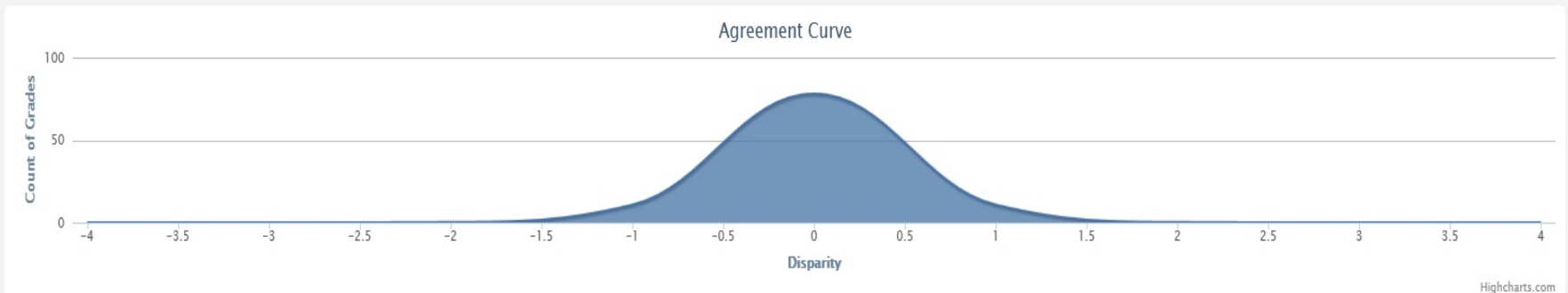
Item: 601
Examinee ID: 326987
-821863-
Not 1128

GRADER STICKER here

During the Grading Session

During the process, we are able to provide live feedback to each coordinator showing how well their team is “agreeing” with each other.

Question 601

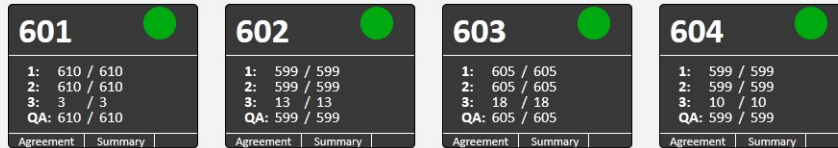


Grader	-4	-3	-2	-1	0	1	2	3	4	Total Read									
	0%	0	0%	0	0%	0	8.3%	21	77.8%	196	13.1%	33	0.8%	2	0%	0	0%	0	252
	0%	0	0%	0	0%	0	3.7%	5	82.8%	111	13.4%	18	0%	0	0%	0	0%	0	134
	0%	0	0%	0	1.9%	3	15.1%	24	72.3%	115	10.7%	17	0%	0	0%	0	0%	0	159
	0%	0	0%	0	0%	0	5.9%	7	83.9%	99	10.2%	12	0%	0	0%	0	0%	0	118
	0%	0	0%	0	0%	0	16.2%	19	73.5%	86	10.3%	12	0%	0	0%	0	0%	0	117
	0%	0	0%	0	0%	0	9.4%	8	80%	68	9.4%	8	1.2%	1	0%	0	0%	0	85
	0%	0	0%	0	0%	0	12.6%	32	77.2%	196	10.2%	26	0%	0	0%	0	0%	0	254
	0%	0	0%	0	0%	0	14.9%	15	80.2%	81	5%	5	0%	0	0%	0	0%	0	101
Totals	0%	0	0%	0	0.2%	3	10.7%	131	78%	952	10.7%	131	0.2%	3	0%	0	0%	0	1220

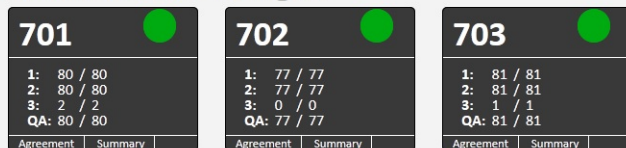
As part of the QA process, after each question is thought to be complete, it is scanned one more time to ensure the system shows it has the required number of grades. We're also able to track the entire process in real time.

Item Progress

Vertical Forces - Buildings



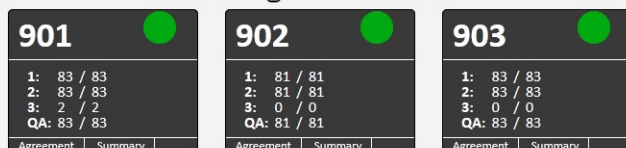
Vertical Forces - Bridges



Lateral Forces - Buildings



Lateral Forces - Bridges



Exceptions

About 2 months ago	801
Sivaji Senepathi has already graded question 801 for examinee 297288.	
About 2 months ago	602
Susan Farnworth has already graded question 602 for examinee 283406.	
About 2 months ago	603
Kevin Dong has already graded question 603 for examinee 322329.	
About 2 months ago	603
Thomas Grogan has already graded question 603 for examinee 305232.	
About 2 months ago	603
William Mancini has already graded question 603 for examinee 305444.	
About 2 months ago	603
Gregg Mendenhall has already graded question 603 for examinee 293422.	
About 2 months ago	602
Joe Pelliccione has already graded question 602 for examinee 337044.	
About 2 months ago	602
Joe Pelliccione has already graded question 602 for examinee 288511.	
About 2 months ago	701
Jim Pyne has already graded question 701 for examinee 321697.	
About 2 months ago	902
Jayme Schiff has already graded question 902 for examinee 322867.	
About 2 months ago	603
Thomas Grogan has already graded question 603 for examinee 317746.	
About 2 months ago	801
David Connolly has already graded question 801 for examinee 284316.	
About 2 months ago	804
Mike Wright has already graded question 804 for examinee 290158.	
About 2 months ago	801
Brian Pietras has already graded question 801 for examinee 312726.	
About 2 months ago	804
Roy Yamashiro has already graded question 804 for examinee 297347.	
About 2 months ago	702
Randall Bernhardt should NOT have graded question 702 for examinee 330098 - should not be coordinator.	
About 2 months ago	702
Jim Toombs should NOT have graded question 702 for examinee 299379 - should not be helper.	

After the Grading Session

- The grades are sent to our psychometric consultant, who combines the morning and afternoon scores and determines the passing score.
- The results are sent back to us for QA and verification and then released to the boards.

April's Grading Session

- 83 scorers
- 16 staff
- 5,201 questions x 2 grades each = 10,402 grades
- 70 questions that required a third grade for a total of 10,472 grades
- Approximately 70,000 scans of bar codes over 2 days

Questions on SE Grading?