



# National Board of Medical Examiners

## Customized Examination

### Scaled Score Interpretation Guide

**School:** 000000 - Generic Medical School

**Examination Name:** Examination Name

**Scaling Group:** B00000 (MM/DD/YYYY)

**Test Dates:** MM/DD/YYYY to MM/DD/YYYY

**Order ID:** B00000

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NBME Customized Examinations provide medical schools with a tool for measuring students' understanding of a series of content areas defined by each school. Course objectives vary across schools, and customized examinations can be targeted to meet the specifics of a given curriculum. NBME neither sets nor recommends a "passing" score. Generally, Customized Examinations should be used in conjunction with other indicators of student performance to determine grades.

#### ***Customized Examination Scores***

Scaled scores were computed for the total test and the content areas that were defined by your faculty during the test construction process. Scaled scores were computed to have a mean of 70 and a standard deviation of 8 for the scaling group of examinees identified in the heading of this report. *Though the scaled scores have the look and feel of percent correct scores, they are not.* This scale provides a useful tool for comparing the scores of your students to one another. **It is important to note that the scaled scores produced for this administration can only be compared to other administrations of this same exam that used the same scaling group.**

In order to compute scaled scores, the scaling group must have at least 25 examinees. For the first administration of an exam, the scaling group consists of examinees from that administration only. For subsequent administrations of the same exam, your school had the option to select the scaling group to be used to compute scaled scores. Scaling groups for the same exam can be defined based on examinees from the current administration, previous administrations, or a combination of both. When a school selects the same scaling group for all administrations of an exam, it allows for direct comparison of examinee scores across test administrations of the same exam.

Percent correct scores were also computed for the total test and content areas. For more information on percent correct scores, please see the Percent Correct Score Interpretation Guide.

#### ***Rosters and Frequency Distributions of Scores***

The Roster of Scaled Scores shows a total test scaled score for each examinee. The scaled scores for the content areas that you selected to appear on the roster are also shown. A Roster of Percent Correct Scores is also provided for each administration. All reported scores also appear in a comma separated value (CSV) text file that can be downloaded and used to import scores into your local database. A content area must have at least 25 items in order for the score to be reported. Numerical scores for content areas with less than 25 items are not reported due to low reliability.

A frequency distribution of the total test scaled score for the total group is provided if two or more examinees tested during the dates shown above. The distribution shows the number and percentage of examinees at each score, along with corresponding cumulative frequencies and percentages.

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***Individual Performance Profiles***

Individual performance profiles reporting total test scaled and percent correct scores are provided if there were at least 25 examinees in the scaling group. Profile bands representing performance on the total test and areas of relative strengths and weakness in content areas selected by your school to appear on the profiles are also shown. A content area must have at least 10 items to appear on a profile. Due to increased measurement error based on small sample sizes and item groups, profile bands for content areas with less than 10 items are not reported. Profiles are posted as separate report files in a zip file, along with a consolidated report file that contains each examinee's profile sorted in last name order.

***Item Analysis Report***

If 10 or more examinees in the current administration met the criteria for inclusion in an item analysis (IA), an online IA report is provided to help you interpret their performance on each item. Examinees who did not take the exam under standard timing conditions, scored more than 3 standard deviations below the mean, omitted more than 10% of the items, and other examinees who were removed at the request of your school were not included in the IA. Item text and related images, along with content area information, item difficulty and the percentage of examinees answering each option are shown. If the IA is based on at least 40 examinees, discrimination indices are also provided. Historical item difficulties for each item based on USMLE Step 1 and/or an NBME subject examination are provided for gross comparative purposes only. Since these values were computed when items appeared in examinations administered in different contexts, caution is advised when interpreting and comparing historical item statistics. Most of the same information is also provided in a printable report and a CSV file.

Further information on interpreting the online IA report can be viewed by clicking on the Help link on the IA screen. The online IA report is available for six months from the date it was posted and can only be accessed with the use of an RSA SecurID® key provided to your school's Executive Chief Proctor.

**National Board of Medical Examiners  
Customized Examination  
Scaled Score Descriptive Statistics**

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Scaled score descriptive statistics, reliability and the standard error of measurement (SEM) values appear below for the total test and all content areas defined by your school.

The reliability coefficient estimate refers to a score's expected consistency. An examination score is reliable to the extent that administration of a different random sample of items from the same content domain would result in little or no change in an examinee's rank order in the group. Reliability is affected by the homogeneity of the items and of the examinees, as well as by the length of the examination. Measurement error is present in all test scores, and the SEM provides an index of the imprecision of scores. Like the standard error for a laboratory study, the SEM is expressed on the same scale as the test scores and can be used to construct confidence intervals around the scores. For example, if an examinee receiving a scaled score of 60 was tested repeatedly with similar exams, 95% of the scores received should fall between 52 and 68 (60 plus/minus two times an SEM of 4).

The reliabilities and SEMs are computed based on the scaling group of examinees. Examinees who did not take the exam under standard timing conditions, scored more than 3 standard deviations below the mean, omitted more than 10% of the items, and other examinees who were removed at the request of your school were excluded from these calculations.

ID	Content Area	N Items	Reliability	SEM	Mean	Total Group (N=100)			Scaling Group (N=99)			
						SD	Low	High	Mean	SD	Low	High
	Total	100	0.72	3	70	8	41	85	70	8	48	84
1	Content Area 1	40	0.41	5	70	8	40	86	70	8	43	82
2	Content Area 2	25	0.4	6	70	8	43	84	70	8	51	86
*	Content Area 3	17	0.32	4	70	8	32	85	70	8	34	82
*	Content Area 4	12	0.4	6	70	8	51	82	70	8	53	83

\* This content area does not appear on the roster but may appear on the individual performance profile.

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**Total Test Scaled Score Frequency Distribution (Based on All Examinees Tested)**

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Total Test Scaled Score	Frequency		Cumulative Frequency		Total Test Scaled Score	Frequency		Cumulative Frequency	
	Count	%	Count	%		Count	%	Count	%
41	1	1	1	1	67	10	6	75	47
45	1	1	2	1	69	10	6	85	53
46	1	1	3	2	70	5	3	90	56
50	1	1	4	2	71	13	8	103	64
53	1	1	5	3	72	6	4	109	68
55	1	1	6	4	74	7	4	116	72
56	4	2	10	6	75	10	6	126	78
57	6	4	16	10	76	6	4	132	82
59	6	4	22	14	78	5	3	137	85
60	2	1	24	15	79	7	4	144	89
61	7	4	31	19	80	5	3	149	93
62	6	4	37	23	81	5	3	154	96
63	10	6	47	29	83	3	2	157	98
65	4	2	51	32	84	3	2	160	99
66	14	9	65	40	87	1	1	161	100

**National Board of Medical Examiners**  
**Customized Examination**  
**Roster of Scaled Scores**

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ID	Name	Total Test Scaled Score	Content Area ID* (Scaled Scores)	
			1	2
00001	EXAMINEE A	65	81	83
00002	EXAMINEE B	72	73	71
00003	EXAMINEE C	53	57	53
00004	EXAMINEE D	65	62	72
00005	EXAMINEE E	85	81	78

\* Please refer to the Scaled Score Descriptive Statistics page for content area names. Note that if no scores are listed, no content areas with at least 25 items were selected to appear on the roster.