## Exam Scoring 101

DSST exams are scored using one of two scoring methods: NormReferenced or Criterion-Referenced Standard Setting. The use of one or the other methodology depends on the DSST exam title and the date the exam was taken. One method is not better than the other they are just different ways of arriving at the same place.

## Norm-Referenced Standard Setting

Historically, DSST exams have been scored using a "norm-referenced" method to determine the pass/fail point for each exam. Using this method, a cut score is set based on judgments about groups of test takers; it establishes what proportions of each group should pass or fail. Whether you pass or fail is based on how you perform in relation to others within the same group. DSST norm-referenced scores range from 20 to 80, with the passing score set between 44 and 49 (C-grade), depending on the exam title.

## Criterion-Referenced Standard Setting

The scoring model applied to all refreshed and new DSST exams is called "criterion-referenced." This method sets cut scores based on judgments about individual test questions or the test as a whole. It determines how many of the test questions must be answered correctly in order to pass. Criterion-referenced scores are based on how much the test takers know, not how they performed against others in the same pool. Criterion-referenced scores range from 200 to 500 , with the passing score set at 400 for all exams.

Having two scoring methods simply means there are two ways of determining what a passing score should be. In 2008, Prometric began converting revised exams to the criterion-referenced method. By 2014, only 8 titles are still scored using the norm-referenced method. Both provide accurate, fair results to all test takers.


## SCENARIO A: <br> Norm-Referenced Standard Setting

Mr. Jones teaches a math class with 30 students in it. On the upcoming exam, Mr. Jones decides that all students with scores in the top $75 \%$ will pass. Once the exam is given, Mr. Jones takes ALL the scores, compares them to each other and then accepts the highest $75 \%$ of scores as passing. In this case, it does not matter if Bill answered $85 \%$ of the questions correctly and Susie only answered $70 \%$ correctly because when looking at all the scores for all 30 students, both Bill and Susie got scores that fell among the top $75 \%$. Bill and Susie, as well as the other students who fell in the top $75 \%$ of scores, pass. The students in the class who scored in the lowest 25\% will not pass, because as compared against the other students, they did not place in the top $75 \%$ (the "cutoff" set by Mr. Jones).

## SCENARIO B:

Criterion-Referenced Standard Setting
Mr. Jones decides that each individual student taking his math test will need to answer $70 \%$ of the questions on the exam correctly to pass. Since Bill gets $85 \%$ of the questions right, he passes because he answered more than $70 \%$ of the questions correctly (as pre-defined by Mr. Jones). Susie gets 65\% of the questions right. Because she did not answer at least $70 \%$ of the questions correctly, she fails. Whether or not Bill or Susie passes is entirely dependent on whether they answered a certain percentage of questions correctly. It has nothing at all to do with how they performed on the exam in relation to each other or to the rest of the class - or whether their score fell in the "top $75 \%$ of all scores" (as in scenario A).

## Why does Prometric have two scoring methods for DSST exams?

In the testing industry, there has been a movement toward using criterion-referenced methodologies, as it is a more widely accepted model. To keep up with today's testing environment, Prometric adopted this scoring method for new and refreshed DSST exams. As we update exam titles, the updated exams are scored using the criterion-referenced methodology.

## What was wrong with the previous way of scoring?

Nothing is wrong with the previous way of scoring, and Prometric continues to use norm-referenced standard-setting and a smaller score scale in all other non-refreshed DSST exams. However, across the testing industry there has been a general movement toward using criterion-referenced standard-setting, which is why DSST exams are being updated to that scoring method. Both standardsetting methods are accurate and reliable.

## Why is the scoring scale 200-500?

The best way to explain this is through an analogy. Temperature can be measured using either degrees Celsius or degrees Fahrenheit, which are different scales of measurement. The point at which water boils is the same, but it is expressed differently at $100^{\circ}$ or $212^{\circ}$ depending on which scale is used. The DSST scale works similarly; because different versions of each exam could require slightly different numbers of items to be answered correctly in order to pass, converting all scores to a common scale means the minimum passing score can remain exactly the same across all exams. The 200-500 scale is simply a way of relating one to the other to "level the playing field." The numbers themselves are representative they were arbitrarily selected for the purpose of creating a scale.

## Are students penalized for guessing wrong answers?

No, students are not penalized on any exam (refreshed or not) for wrong answers. Students are awarded points for correct answers. If a student answers incorrectly, they simply are not awarded the point for that question.

## Are all questions weighted evenly?

Yes. All exam questions carry the same weight. Students are awarded points for correct answers, but they do not receive points for incorrect answers.

## How are essays scored on the exams that have them?

Ethics in America and Technical Writing exams include optional essays and thus are not scored by DSST raters. The essays are forwarded to the institution the test taker designates, along with a score report. The essay is then scored by the credit-accepting institution. Before taking either examination, students have to check with their college or university to determine whether the essay is required.

## What does the difference in scoring methods mean for students?

The scoring differences don't have much, if any, impact on students. Students taking one of the refreshed DSST exams will need to answer a certain pre-defined percentage of the questions correctly in order to pass. The different versions of a given exam may vary in difficulty, but the number of test questions required to pass is adjusted to accommodate any differences in difficulty - for example, students receiving a more difficult version of a test title will be required to answer a lower percentage of questions correctly in order to pass. The percentage of test questions required to pass each exam falls within a range as follows (refreshed and new exams only):

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| Exam | Correct To PASS |
| A History of the Vietnam War | $58 \%$ |
| Art of the Western World | $59-68 \%$ |
| Astronomy | $49 \%$ |
| Business Ethics and Society | $52-53 \%$ |
| Business Mathematics | $68-72 \%$ |
| Computing \& Information Technology | $61-63 \%$ |
| Criminal Justice | $60-61 \%$ |
| Environment and Humanity | $56-57 \%$ |
| Ethics in America | $45-47 \%$ |
| Foundations of Education | $54-56 \%$ |
| Fundamentals of College Algebra | $37-43 \%$ |
| Fundamentals of Counseling | $57-59 \%$ |
| Fundamentals of Cybersecurity | $65-66 \%$ |
| General Antropology | $54-55 \%$ |
| Health \& Human Development | $58-59 \%$ |
| History of the Soviet Union | $42 \%$ |
| Human Resources Management | $55-69 \%$ |
| Human Cultural Geography | $62 \%$ |
| Introduction to Business | $49-51 \%$ |
| Introduction to Law Enforcement | $58 \%$ |
| Introduction to World Religions | $46 \%$ |
| Lifespan Developmental Psychology | $58-61 \%$ |
| Management Information Systems | $52-55 \%$ |
| Money \& Banking | 50 |
| Organizational Behavior | $55 \%$ |
| Personal Finance | $51-52 \%$ |
| Principles of Finance | $53-54 \%$ |
| Principles of Physical Science I | $36-38 \%$ |
| Principles of Public Speaking | $67-69 \%$ |
| Principles of Statistics | $42-46 \%$ |
| Principles of Supervision | $41-46 \%$ |
| Substance Abuse | $53-54 \%$ |
| Technical Writing | $62-68 \%$ |
| The Civil War and Reconstruction | $62-68 \%$ |
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