

## Exploring IT Technical Assessments

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### Agenda

- Information on researched technical aptitude tests
  - ProveIT
  - MeasureUP
  - Smarterer
- Perceived Pros and Cons of each tool
- Contact information to inquire about additional demonstrations and implementation for your program



## Purpose

### IT TECHNICAL APTITUDE TESTING RESEARCH



The JD NEG grant plan recognizes the need to locate technical aptitude tests targeting IT customers.



Tests needed to determine customers' aptitude in two areas:

- Brand new to IT
- Previous IT experience



Our goal is to provide tests useful for IT customers using both JD NEG and WIOA formula funds.

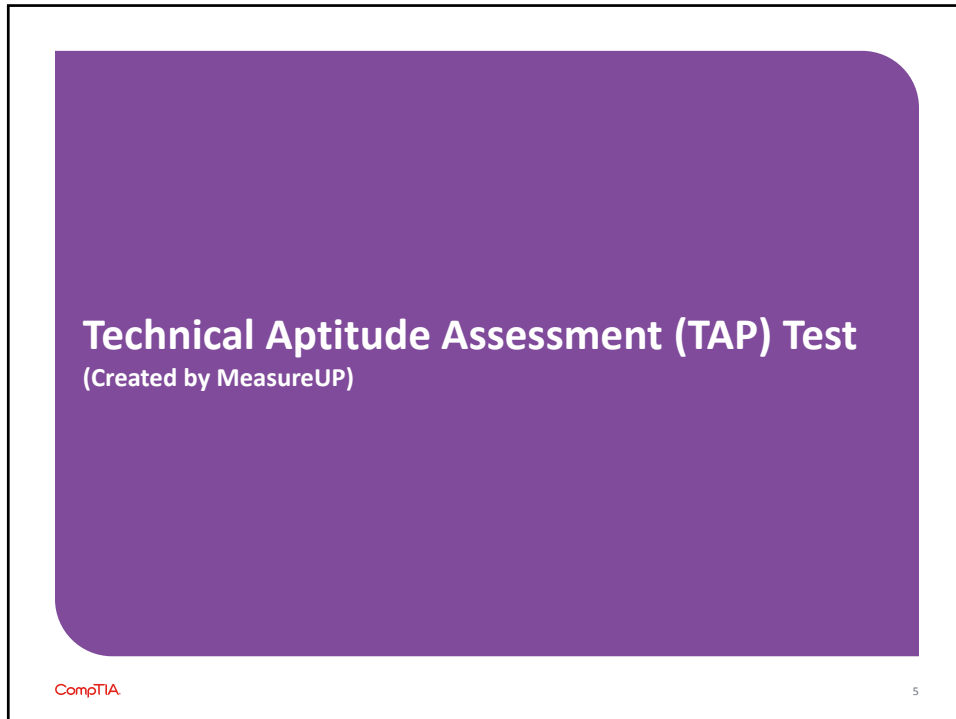


Test results must provide feedback leading to gainful employment.

They must also be affordable to the workforce agency.

## Current Testing Issues

- Sometimes clients are misdirected into/away from IT
- Current aptitude tests don't ask industry specific questions, they are too general
- Many locations have zero testing for technical aptitude
- Using only previous skills to determine pathway for training/employment, which limits the thought of career change
- Not enough funding in budget to afford additional tests
- Clients must take multiple tests to obtain GLE requirements and specific technical aptitude results



**Technical Aptitude Assessment (TAP) Test**  
(Created by MeasureUP)

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**MeasureUP-TAP Technical Aptitude Assessment**

- Designed to determine customer's ability to learn new content and technologies quickly
- Geared towards customers who are brand new to IT field
  - Used by Dept. of Defense in conjunction with the Wounded Warrior Project
- Tests four areas:
  - Verbal Reasoning
  - Numerical Reasoning
  - Symbolic Reasoning
  - Visual Speed and Accuracy
- Test takes 20 minutes, 5 minutes per section.
- Psychometrically validated
- Those with results in the 40<sup>th</sup> percentile or lower shows they would struggle to learn IT technologies
- Test is set to be geared toward technical aptitude and cannot be tailored

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## Instructions Page

### General Instructions



#### Introduction

This group of tests measures general reasoning and perceptual abilities that are important for success in IT jobs.

- The assessment consists of 4 separately timed tests.
- Each test has its own set of instructions.

The tests have short time limits, so you should work as quickly and accurately as possible.

#### General Test Instructions

- All tests use a multiple-choice format.
- To **answer** a question, click on the button below one of the answer choices.
- To **change** your answer to a question, simply click on a different answer. Your first answer will change automatically.
- To **remove** an answer, right-click on the marked answer.

During the test, you can keep track of the number of questions answered and time remaining. This information will appear just below each set of items.

Several questions are presented on the screen at the same time. To go to the next set of questions, click on the **NEXT** link.

## Instructions Page

### Numerical Reasoning



Look at the sample problems below. Each series of numbers is followed by a question mark where the next number of the series should be. There are patterns in the series. Your task is to look in the answer columns to the right of the question mark and find a number which will continue the series. Indicate your answer by clicking on the answer button below the proper number.


In the first sample problem (1, 4, 7, 10, 13, 16, 19, ?) each number is 3 more than the preceding number. Therefore, the next number should be 3 more than 19. 19 plus 3 is 22. Therefore, the button under 22 in the answer columns has been marked.

Now look at the four remaining sample problems. Find the pattern in each series, decide what number should come next, and mark it in the answer columns. Work these problems now.

1. 1 4 7 10 13 16 19 ? 20 21 22 23 24
2. 20 18 16 14 12 10 8 ? 7 6 5 4 3
3. 20 20 19 19 18 18 17 ? 17 16 15 14 13
4. 4 6 5 7 6 8 7 ? 6 7 8 9 10

## Instructions Page

Symbolic Reasoning



Look at the sample problems below. Each problem contains a statement and a conclusion. The statements and conclusions are given in a code as follows:

- = means "is equal to."
- > means "is larger than."
- < means "is smaller than."
- ≠ means "is not equal, and so is larger or smaller."
- ≥ means "is not larger, and so is equal or smaller."
- ≤ means "is not smaller, and so is equal or larger."

Your task is to decide whether each conclusion is definitely true, definitely false, or impossible to definitely determine on the basis of the statement.

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In the first example below, the statement says that X is equal to Y, and Y is equal to Z. The conclusion says that X is equal to Z. Since X, Y, and Z are all equal to each other, the conclusion is definitely true. Therefore, the answer space under "T" has been marked.

1.  $X = Y = Z$ , therefore,  $X = Z$       T F ?

In the next problem, the statement says that X is larger than Y, and Y is larger than Z. The conclusion says that X is equal to Z. Since Y is larger than Z, X must be even larger, and the conclusion is definitely false. Therefore, the answer space under "F" has been marked.

2.  $X > Y > Z$ , therefore,  $X = Z$       T F ?


In the third sample problem, the statement says that X is not equal to Y, and Y is not equal to Z. The conclusion says that X is not larger than Z. The statement indicates that neither X nor Z is equal to Y, but there is no way to tell whether X is larger, smaller, or equal to Z. Therefore, the conclusion is uncertain, and the answer space under "?" has been marked.

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## Instructions Page

Verbal Reasoning



Look at the sample problem below. First read the list of facts. After you have read all the facts, look at each conclusion. From the facts, you can tell that some of the conclusions are definitely true and some are definitely false, but in some cases you just cannot tell from the facts whether the conclusion is either true or false. If you decide a conclusion is definitely true, mark the answer space under "T." If it is definitely false, mark the answer space under "F." If the facts do not give enough information to tell whether a conclusion is definitely true or definitely false, mark the answer space under "X."

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In the example below, the facts say that Chris works only as a welder, and that Company B employs no welders. Chris could not work for Company B because it does not employ welders. Therefore, the first conclusion is definitely true, and the answer space under "T" has been marked. The facts also say that Chris' only child is a girl, which means that Chris' son could not be ill since Chris has no son. Therefore, the second conclusion is definitely false, and the answer space under "F" has been marked. From the facts that are given, there is not enough information to know definitely where Chris works. Chris does not work for Company B because that company employs no welders. It is possible that Chris works for Company C, but is also possible that Chris works somewhere else. Therefore, the third conclusion is uncertain, and the answer space under "X" has been marked.

Now mark each of the two remaining conclusions: "T" for true, "F" for false, and "X" for uncertain.

**FACTS**  
 Chris works only as a welder.  
 Terry works for Company B.  
 Chris' only child is a girl.  
 Company A makes automotive parts.  
 Company B employs no welders.

**CONCLUSIONS**

T F X  
 1.    Chris does not work for Company B.


T F X  
 2.    Chris' son is ill.

T F X  
 3.    Chris works for Company C.

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## Instructions Page



**Visual Speed and Accuracy**

This test requires that you work as quickly as possible.

Look at the pairs of numbers below. The first pair of numbers, 792 and 792, are exactly alike. Therefore, the space to the right under **S (same)** has been filled in. The second pair of numbers, 6122 and 6123, are not exactly the same. Therefore, the space to the right under **D (different)** has been filled in. The next pair, \$698 and \$898, are marked to show that they are the same. The fourth pair, 72,10 and 72,10, are marked as different because one has a period in it while the other has a comma.

Now mark the next four items for practice.

		S	D		
792	792	<input checked="" type="radio"/>	<input type="radio"/>		
		S	D		
6123	6122	<input type="radio"/>	<input checked="" type="radio"/>		
		S	D		
\$898	\$898	<input checked="" type="radio"/>	<input type="radio"/>		
		S	D		
72,10	72,10	<input type="radio"/>	<input checked="" type="radio"/>		
		S	D		
33333	33323	<input type="radio"/>	<input type="radio"/>		
		S	D		
1171	1171	<input type="radio"/>	<input type="radio"/>		
		S	D		
72	24	<input type="radio"/>	<input type="radio"/>		
		S	D		
6696	6696	<input type="radio"/>	<input type="radio"/>		

You should have marked them D, S, D, and S. If you have any questions, contact the test administrator.

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### mu-demo - Technical Aptitude Assessment Results

[Jump](#) [Length](#) [Next](#)  
Page 1 of 10 (142 records) | [Login](#) | [Search](#)  
 Ordered by: "Test Date" Descending

#	ExamineeID	Examinee	Raw Score	Percentile	Test Date	Score Report Detail
1	234567891	Maseberg, Nicole	94	93	2/12/2015 10:28:45 AM	<a href="#">View</a>
4	234567891	Larsau, Jeffrey	98	96	1/6/2015 4:24:16 PM	<a href="#">View</a>


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## Technical Aptitude Assessment

Candidate Score Report



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Name: Nicole Maseberg  
 ID: 234567891  
 Date: 2/12/2015 10:31:23 AM

Overall Aptitude Rating: Well Above Average

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**PERCENTILE SCORES**

Section	Raw Score	Percentile
Total Battery	94	93
Numerical Reasoning	12	57
Verbal Reasoning	19	83
Symbolic Reasoning	17	85
Visual Speed and Accuracy	141	94

Compared to others taking this test, candidates scoring at this level are well above average in ability.  
 Norm Group: IT General

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### Test Records

Page 1 of 1 (4 records) | [Link](#)  
 Ordered by: Default Report Order

#	Name	Raw Score	Answered Questions	Total Questions	StartTime	EndTime
1.	Numerical Reasoning	12	13	20	2/12/2015 10:31:23 AM	2/12/2015 10:36:28 AM
2.	Verbal Reasoning	19	26	30	2/12/2015 10:38:04 AM	2/12/2015 10:43:09 AM
3.	Symbolic Reasoning	17	23	30	2/12/2015 10:45:07 AM	2/12/2015 10:50:12 AM
4.	Visual Speed and Accuracy	141	145	150	2/12/2015 10:51:05 AM	2/12/2015 10:56:20 AM

Page 1 of 1 (4 records) | [Link](#)  
 Printed: 2/12/2015 11:01:00 AM  
 \* Unchecked \*

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## Pros

- Geared to measure general technical aptitude for an IT position
- Psychometrically validated and used by the Department of Defense
- Test is completed quickly and can be done online or in workforce center using access code
- Targeted specifically for entry level customers
- Indicates if a customer would struggle to learn technology
- **\*\*Best for targeting brand new to IT customers\*\***

## Cons

- Uses Internet Explorer only to run program
- Not geared toward a yearly membership fee
  - Must purchase uses in groups of 12 or more
  - Test vouchers expire after 1 year
- Only one test, cannot incorporate math and reading GLE or customize to needs of workforce agency
- Won't lead toward specific training suggestions, but will determine if they will be able to grasp concepts being taught

**\*\* Some of these gaps we hope will be filled by the tools provided by Burning Glass \*\***

## MeasureUP Contact Information



- Ilene Steinberg
  - VP of Sales and Operations
  - 678-793-8193
  - [www.measureup.com](http://www.measureup.com)
  - skype: mupsales




# Prove It!

By Kenexa (Owned By IBM)

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## Sample Prove It! Test Titles

- C++ Programming
- Cisco Networking
- Cisco Router
- Crystal Reports 8.0
- DB2 Developer
- J2EE
- Java SE 7
- Lan Concepts
- Linux Administrator
- Microsoft Windows 8 Technical Skills
- Network Administrator
- Network Security
- Oracle 9i DBA
- SAP Database
- Technical Support – IT/Network
- Technical Support Processes
- VMWare Workstation 7
- Wan Architecture
- Wireless Networking
- And Many More (1,300+)



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## Pros

- Already used by large companies, recruiters, and some workforce centers to test candidates aptitude
- Customizable in a variety of ways:
  - Can design registration page to reflect your agency
  - Can add/remove questions from specific tests
  - Can add a time limit to questions to reduce cheating
  - Can combine tests to target a position
- Large quantity of IT tests available
  - Also incorporates additional industry specific tests incl: manufacturing, accounting and healthcare
  - Content is always being updated
- Extremely user friendly
- Customer service is easy to work with to develop tests to meet agency's needs
- Tests can be taken at home utilizing a customer login or in the workforce center
- Test can be reviewed question by question
  - Can be retaken to show improvement
- Results can be used to target level where training is needed: basic, intermediate or advanced level of knowledge
  - Results received can help develop IEP goals based on skills gaps
- Pay structure is simple. Yearly subscription for the portfolio of tests
- Can possibly add Math and Reading GLE testing if accepted by IWDS

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## Cons

- Tests current knowledge, may not be suitable for customers with no previous experience
- Because it is cloud based, Java needs to continually be updated to support their platform
- Not a free platform. Yearly fee required.
  - Additional fees to add behavioral tests or to create new tests
- No current GLE tests for reading or math, but may be able to be added for a fee
  - Could possibly be added to IWDS for GLE results once math and reading tests are vetted.

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## Contact Info for Prove IT

### Contact Us

**North America**

**Asia**

**Europe**

**India**

**Oceania**

**South Africa**

#### North America

340 North 12th Street  
Suite 309  
Philadelphia, PA 19107 USA  
Phone: (800) 935-6694 toll-free  
Fax: (215) 925-3406

#### Sales

[ProveItSales@Kenexa.com](mailto:ProveItSales@Kenexa.com)  
(800) 935-6694 toll-free

#### Technical Support

24 hours / day | 7 days / week  
[ProveItSupport@us.ibm.com](mailto:ProveItSupport@us.ibm.com)  
(855) 306-1669

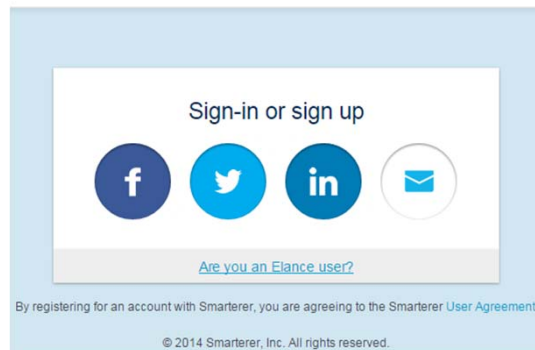
**Smarterer**  
(Owned by Pluralsight)




- Tests specific skills for IT (ex: Java, Networking, Microsoft Office)
- Test questions are developed through crowdsourcing, and validated through various algorithms





## Smarterer



**Smarterer**


 **Smarterer**  
a Pluralsight company

Author Account Log Out 

Dashboard Take Tests Create Tests  

[All Tests](#) > Search Results for "technical aptitude"

## Search Results for "technical aptitude"




**Technical Aptitude**  
 ✓ Beginner (165)  
 1,661 testers

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**Smarterer**

Complete the series: 4, 3, 8, 6, 16, ...



Don't rush. There's no bonus for finishing early!

- Sample question from the Technical Aptitude Test (similar to MeasureUP's TAP test).
  - The "16" on the right represents how many seconds you have left to answer.

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## Smarterer

- List of tests taken:



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## Pros

- Free to use for anyone
- Infinitely customizable
  - Can be paired together with other Smarterer tests to meet needs of a specific position
  - Very willing to work with entities to meet their needs
- Tests are very short, avg. 5 minutes each, and can be as short as 2 minutes.
- Designed to determine technical aptitude for specific position or skill
  - This may lead a customer towards specific training or employment to improve these levels
- Very slick, modern interface
  - API can be customized to your website

## Cons

- There's no detailed breakdown of your results.
  - Only given a score out of 800
  - Can't review question by question
- Due to crowdsourcing, there is a very small chance that the test taker will be given a dud question
- No current GLE equivalent for IWDS screens.
- Not primarily geared toward entry level candidates at this point in time, but Smarterer team has some plans to address this
- Not psychometrically validated

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## Contact



[info@smarterer.com](mailto:info@smarterer.com)

(857)268-5263

Call to schedule a demo

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## Recap

Opinions from our perspective:

- If your clientele is primarily entry level, Measure UP's TAP test would be the most beneficial
- If your clientele has previous experience in their desired field, Prove It would be the most beneficial
- If your clientele has previous experience in their desired field, but your center lacks the funding for an additional test, Smarterer would be the most beneficial

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## Recap

- Please use the contact information in the slides above to explore adding one or all of these tools to your assessment procedures
  - Jeff and Nicole can be your connection to these providers as you explore them for further use
- Additional aptitude tests will be researched and presented in a future webinar

## Questions??



We want to hear from you!

Where are you struggling when working with your IT focused clients?

What information would you find beneficial to help make the IT JD NEG grant a success?



### Upcoming Webinars:

- [Here is a link](#) to our previous webinar discussing CompTIA's IT Certification Roadmap and Job Locator Tools
- IT Resume and Transferrable Skills: 3/19/15 (est.)
- Participant Outreach and Marketing Tools: 3/31/15 (est.)
- Illinois workNet IT NEG Website (TBA)



Please visit the NEG page on Illinois workNet for an up-to-date calendar of events and registration information:

[www.illinoisworknet.com/jobdrivenNEG](http://www.illinoisworknet.com/jobdrivenNEG)

**Thank you.**

**For more information contact:**

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