

# Linguistic Modification for English Language Learners The Virginia Procedure

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"An Experimental Study of Linguistic  
Modification as a Testing  
Accommodation for ELLs"

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# Situation

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- Virginia is an “English-Only” state.
- All state tests are administered only in English.
- English language learners speak over 190 different languages. (September 2007)



# Situation

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- The need exists for a mathematics assessment accessible to
  - English Language Learners; and
  - Students with disabilities in language processing.



# Language Modification Two-Step Process

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- The test contractor modifies items on existing test to reduce language load without changing mathematical construct.



# Language Modification Two-Step Process

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- A committee of Virginia educators review the modified items:
  - Accept modified items; or
  - Edit modified items.



# Essential Elements

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- Identify the mathematical constructs and skills being assessed.
- Understand the elements of language load and their effect on language processing.
- Identify vocabulary and situations that are accessible to the targeted students.



# Examples of Modified Items

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## Regular Version

**3 One batch of Derrick's pancake recipe takes  $2\frac{3}{4}$  cups of milk. If Derrick makes 3 batches of his pancake recipe, how many cups of milk will he need?**

- A  $8\frac{3}{4}$  cups
- B  $8\frac{1}{4}$  cups
- C  $6\frac{3}{4}$  cups
- D  $6\frac{1}{4}$  cups

## Plain English Version

**3 John plays soccer  $2\frac{3}{4}$  hours each day. How many hours does he play in 3 days?**

- A  $8\frac{3}{4}$  hours
- B  $8\frac{1}{4}$  hours
- C  $6\frac{3}{4}$  hours
- D  $6\frac{1}{4}$  hours



# Examples of Modified Items

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## Regular Version

- 42 Which method could be used to solve the number sentence shown?

$$4x = 16$$

- F Subtract 4 from  $4x$ , and subtract 4 from 16
- G Subtract 4 from  $4x$ , and subtract 16 from 16
- H Divide  $4x$  by 4, and divide 16 by 16
- J Divide  $4x$  by 4, and divide 16 by 4

## Plain English Version

- 42 Which step solves this number sentence?

$$4x = 16$$

- F  $4x - 4 = 16 - 4$
- G  $4x - 4 = 16 - 16$
- H  $4x \div 4 = 16 \div 16$
- J  $4x \div 4 = 16 \div 4$

# Examples of Modified Items

## Regular Version

- 16 The picture shows the number of stars Angie received from her piano teacher for practicing.

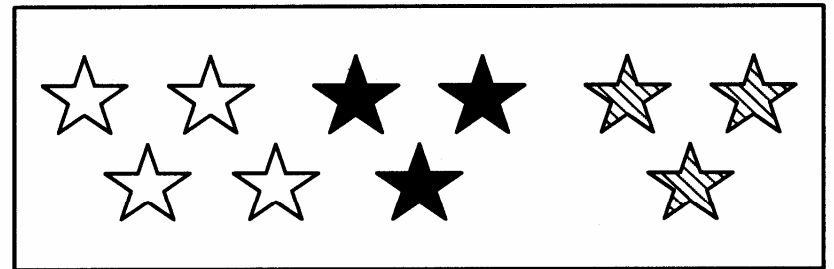


What is the ratio of the number of striped stars to black stars?

- F 4 to 3
- G 3 to 4
- H 4 to 10
- J 6 to 10

## Plain English Version

- 16 Look at the picture.



What is the ratio of white stars to black stars?

- F 4 to 3
- G 3 to 4
- H 4 to 10
- J 6 to 10



## More Examples

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- <http://www.doe.virginia.gov/VDOE/Assessment/Release2006/index.html>



# Study of 2006 Assessments

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- A comparison of Regular Version (RV) and Plain English Version (PEV) results showed
  - Raw-to-Scale score conversions were almost identical.



# Study of 2006 Assessments

Results: Evidence of the comparability of RV and PEV  
(comparison of the raw-to-scale scores) Spring 2006

	Scale Score 400		Scale Score 500	
	Regular Version Raw Score	Plain English Version Raw Score	Regular Version Raw Score	Plain English Version Raw Score
Grade 3 Mathematics	<b>35</b>	<b>34</b>	<b>45</b>	<b>45</b>
Grade 4 Mathematics	<b>31</b>	<b>30</b>	<b>43</b>	<b>43</b>
Grade 5 Mathematics	<b>35</b>	<b>34</b>	<b>44</b>	<b>44</b>
Grade 6 Mathematics	<b>34</b>	<b>32</b>	<b>44</b>	<b>43</b>
Grade 7 Mathematics	<b>35</b>	<b>34</b>	<b>45</b>	<b>45</b>
Grade 8 Mathematics	<b>32</b>	<b>31</b>	<b>42</b>	<b>42</b>
Algebra I	<b>27</b>	<b>25</b>	<b>45</b>	<b>44</b>



# Study of 2006 Assessments

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- A comparison of difficulties of RV and PEV items taken by English speaking students showed
  - 70% of items varied less than 0.15 on the Rasch scale.



# Study of 2007 Assessments

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- A comparison of Regular Version (RV) and Plain English Version (PEV) results showed
  - Raw-to-Scale score conversions were almost identical as they were in 2006.



# Study of 2007 Assessments

Results: Evidence of the comparability of RV and PEV  
(comparison of the raw-to-scale scores) Spring 2007

	Scale Score 400		Scale Score 500	
	Regular Version Raw Score	Plain English Version Raw Score	Regular Version Raw Score	Plain English Version Raw Score
Grade 3 Mathematics	<b>35</b>	<b>34</b>	<b>46</b>	<b>46</b>
Grade 4 Mathematics	<b>31</b>	<b>31</b>	<b>43</b>	<b>43</b>
Grade 5 Mathematics	<b>34</b>	<b>33</b>	<b>44</b>	<b>43</b>
Grade 6 Mathematics	<b>34</b>	<b>34</b>	<b>44</b>	<b>44</b>
Grade 7 Mathematics	<b>31</b>	<b>31</b>	<b>42</b>	<b>42</b>
Grade 8 Mathematics	<b>32</b>	<b>31</b>	<b>42</b>	<b>42</b>
Algebra I	<b>28</b>	<b>27</b>	<b>46</b>	<b>45</b>



# Impact of Our Procedure on Other Assessments

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- More attention is given to universal design on all assessments:
  - Reduction of language load
  - Simplification of graphics



# Impact of Our Procedure on Other Assessments

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- Involvement of content specialist in modification of regular tests
  - Braille versions
  - Large-print versions
  - Audio Versions