

Minnesota

**Minnesota Test of Academic Skills (MTAS)  
Mathematics Item Sampler  
Grade 5**



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**Minnesota** Department of  
**Education**

# Minnesota Test of Academic Skills

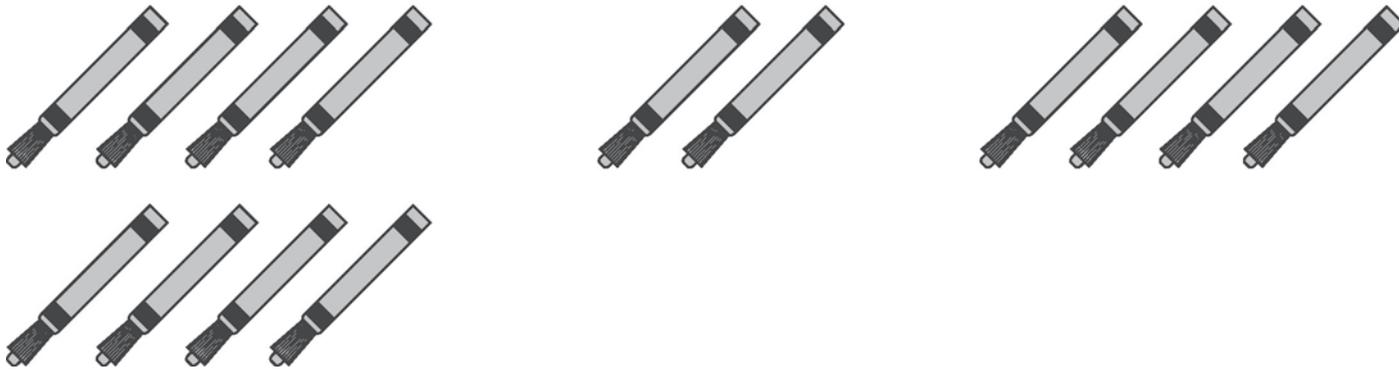
## Grade 5 Mathematics

### Sample Task 1

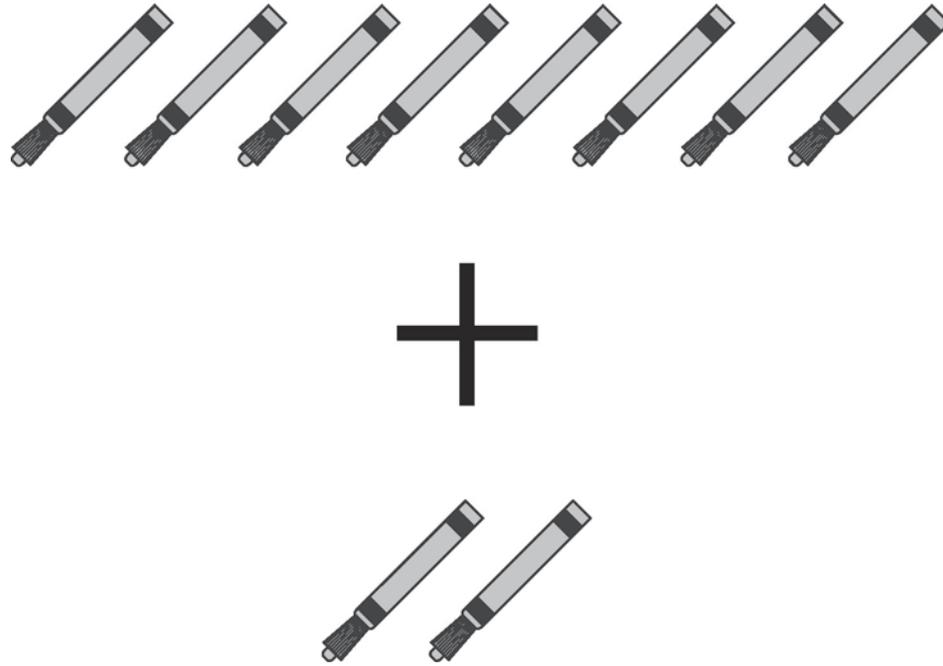
Test Administrator Instructions	Score	Student Responses
<p><i>Administration notes:</i></p> <ul style="list-style-type: none"> <li>▪ You may use objects when presenting questions and answer options. However, some tasks limit how objects can be used; any limitations will be specified on the task.</li> <li>▪ Repeat the question exactly as it appears at score 3 as many times as needed until the student responds or until it is clear that the student will not respond.</li> </ul>		
<p><u>Present:</u> M5_Sample 1.1</p> <p><b>Say: You have 8 markers. The teacher gives you 2 more markers. Then you give 4 markers to a friend. How many markers do you have now?</b></p> <p><u>Present</u> the answer options in order. <i>Point to each option as you say it.</i></p> <p><b>A. 6</b> <b>B. 10</b> <b>C. 14</b></p>	<b>3</b>	<p>6</p> <p><i>If you believe the student's correct response was unintentional, reorder the answer options to B, C, A (instead of A, B, C). Repeat the question. If the student chooses the correct answer again, the task should be scored a 3. If the student chooses an incorrect answer, continue below.</i></p>
<p><i>Additional administration notes:</i></p> <ul style="list-style-type: none"> <li>▪ If the student responds incorrectly or not at all, present the task with support as scripted.</li> <li>▪ Once additional support is provided, the task may not be re-administered for a score of 3.</li> </ul>		
<p><u>Present:</u> M5_Sample 1.2</p> <p><b>Say: Here are 8 markers. Point to the row of 8 markers. You get 2 more markers, so add 2. Point to the row of 2 markers. You give 4 markers away, so take away 4. Briefly cover up 4 of the markers in the row of 8 markers to show that they should be subtracted. How many markers do you have now?</b></p> <p><u>Re-present</u> the answer options in order. <i>Point to each option as you say it.</i></p> <p><b>A. 6</b> <b>B. 10</b> <b>C. 14</b></p>	<b>2</b>	<p>6</p> <p><i>If you believe the student's correct response was unintentional, reorder the answer options to B, C, A (instead of A, B, C). Repeat the question. If the student chooses the correct answer again, the task should be scored a 2. If the student chooses an incorrect answer, the task should be scored a 1.</i></p>
	<b>1</b>	10 or 14
	<b>0</b>	Unrelated or none

**Grade 5 Math 5.1.1.4:** Students will solve problems using addition, subtraction, multiplication and division of whole numbers. Students will use the inverse relationships between operations and the context of the problem to assess the reasonableness of results.

$$8 + 2 - 4$$



You have 8 markers. The teacher gives you 2 more markers. Then you give 4 markers to a friend. How many markers do you have now?



How many markers do you have now?

M5\_Sample 1  
A

6

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M5\_Sample 1  
B

10

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M5\_Sample 1  
C

14

# Minnesota Test of Academic Skills

## Grade 5 Mathematics

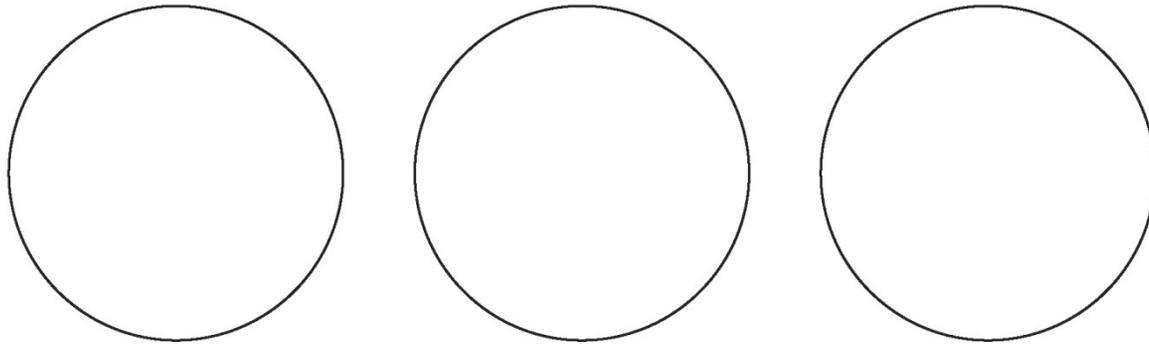
### Sample Task 2

Test Administrator Instructions	Score	Student Responses
<p><i>Administration notes:</i></p> <ul style="list-style-type: none"> <li>▪ You may use objects when presenting questions and answer options. However, some tasks limit how objects can be used; any limitations will be specified on the task.</li> <li>▪ Repeat the question exactly as it appears at score 3 as many times as needed until the student responds or until it is clear that the student will not respond.</li> </ul>		
<p><u>Present:</u> M5_Sample 2.1</p> <p><u>Say:</u> <b>Here is an equation: three times <math>m</math> equals eighteen (<math>3 \times m = 18</math>).</b> Point to the equation. <b>What does <math>m</math> equal?</b></p> <p><u>Present</u> the answer options in order. Point to each option as you say it.</p> <p><b>A. 3</b>  <b>B. 6</b>  <b>C. 15</b></p>	<b>3</b>	6
<p><i>Additional administration notes:</i></p> <ul style="list-style-type: none"> <li>▪ If the student responds incorrectly or not at all, present the task with support as scripted.</li> <li>▪ Once additional support is provided, the task may not be re-administered for a score of 3.</li> </ul>		
<p><u>Present:</u> M5_Sample 2.2</p> <p><u>Say:</u> <b>You can use blocks to find what <math>m</math> equals. There are 18 blocks altogether.</b> Point to the line of 18 blocks. <b>Put the blocks into 3 equal groups.</b> Point to each of the circles. <b>The number of blocks in each group is <math>m</math>.</b> What does <math>m</math> equal?</p> <p><u>Re-present</u> the answer options in order. Point to each option as you say it.</p> <p><b>A. 3</b>  <b>B. 6</b>  <b>C. 15</b></p>	<b>2</b>	6
	<b>1</b>	3 or 15
	<b>0</b>	Unrelated or none

**Grade 5 Math 5.2.3.1:** Students will determine whether an equation is true or false for a given value of a variable.

$$3 \times m = 18$$

What does  $m$  equal?



$$3 \times m = 18$$

What does  $m$  equal?

M5\_Sample 2  
A

3

---

M5\_Sample 2  
B

6

---

M5\_Sample 2  
C

15

# Minnesota Test of Academic Skills

## Grade 5 Mathematics

### Sample Task 3

Test Administrator Instructions	Score	Student Responses
<p><i>Administration notes:</i></p> <ul style="list-style-type: none"> <li>▪ You may use objects when presenting questions and answer options. However, some tasks limit how objects can be used; any limitations will be specified on the task.</li> <li>▪ Repeat the question exactly as it appears at score 3 as many times as needed until the student responds or until it is clear that the student will not respond.</li> </ul>		
<p><u>Present:</u> M5_Sample 3.1</p> <p><b>Say:</b> Here is a table about the weather. It shows how many days it was sunny, snowy, or rainy. Point to each type of weather as you refer to it. <b>How many days altogether was the weather snowy or rainy?</b></p> <p><u>Present</u> the answer options in order. Point to each option as you say it.</p> <p><b>A. 6</b> <b>B. 10</b> <b>C. 12</b></p>	<b>3</b>	12
<p><i>Additional administration notes:</i></p> <ul style="list-style-type: none"> <li>▪ If the student responds incorrectly or not at all, present the task with support as scripted.</li> <li>▪ Once additional support is provided, the task may not be re-administered for a score of 3.</li> </ul>		
<p><u>Re-present:</u> M5_Sample 3.1</p> <p><b>Say:</b> Here is the number of snowy days. Point to the number of snowy days. Here is the number of rainy days. Point to the number of rainy days. <b>How many days altogether...with your finger, draw a circle around the numbers of snowy and rainy days...was the weather snowy or rainy?</b></p> <p><u>Re-present</u> the answer options in order. Point to each option as you say it.</p> <p><b>A. 6</b> <b>B. 10</b> <b>C. 12</b></p>	<b>2</b>	12
	<b>1</b>	6 or 10
	<b>0</b>	Unrelated or none

**Grade 5 Math 5.4.1.2:** Students will display and interpret data in tables, double-bar graphs and line graphs.

Weather		Number of Days
	Sunny	2
	Snowy	8
	Rainy	4

How many days altogether was the weather snowy or rainy?

M5\_Sample 3  
A

6

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M5\_Sample 3  
B

10

---

M5\_Sample 3  
C

12

## MTAS Mathematics Object List (OPTIONAL) Mathematics Item Sampler

The MTAS Object Lists for mathematics and science include examples of objects and other variations in the presentation of the MTAS tasks. Some common ways to vary the task presentation include (1) using Braille text and tactile graphics, enlarging, or texturizing print and (2) supplementing numbers in tasks with some type of counter. These variations may be used with nearly all math and science tasks unless explicitly prohibited in the task script.

Calculators are allowed on all tasks but may be especially useful for tasks involving basic operations (addition, multiplication, subtraction, and division). Students may use **any** type of calculator on the MTAS with which they have demonstrated appropriate competence during classroom instruction.

Keep in mind that these lists provide recommendations only; test administrators may use different objects and/or text formats to make tasks more accessible for individual students as long as students are not provided with additional content information. For example, several math tasks incorporate a number line with an unlabeled point. Number lines used in classrooms may not be appropriate for all of the MTAS tasks if all points are labeled.

Please contact MDE ([mde.testing@state.mn.us](mailto:mde.testing@state.mn.us)) if you have questions about objects that may be used to represent MTAS tasks.

Task	Objects
<b>Grade 5 Sample 01</b>	<p><b>Present task using preferred counting materials such as counters, tactile symbols, tally cards, and grouping tools. A calculator may also be used.</b> 14 counters</p> <p><b>Present answer options using counters or Braille:</b> 6 counters 10 counters 14 counters <b>Note:</b> Total counters needed: 44 counters</p>
<b>Grade 5 Sample 02</b>	<p><b>Present task using math tiles or Braille and preferred counting materials such as counters, tactile symbols, tally cards, and grouping tools. A calculator may also be used.</b> <math>3 \times m = 18</math></p> <p><b>Present additional information for score 2 using counters and felt circles or tactile graphics:</b> 18 counters 3 circles</p> <p><b>Present answer options using counters and/or Braille:</b> 3 6 15</p> <p><b>Note:</b> Total counters needed: 42 counters</p>

<b>Grade 5 Sample 03</b>	<b>Present task using sticky string, pictures, and math tiles or Thermoform/Piaf pages. A calculator may also be used.</b> Pictures: sun, snowflake, raindrops Numerals: 2 ,4, 8  <b>Present answer options using math tiles or Braille:</b> 6 10 12
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