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Multi-State Alternate Assessment

Teacher Guide

Directions for Test Administration

Mathematics

Grades 3–5

Mathematics Table of Contents

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Purpose

The Directions for Test Administration (DTA) is required for administration.
The DTA provides the exact wording of the items to be used by the TA during administration, the materials needed in preparation of the test, and guidelines for how to present the items to the student.

Guidance on Printed Materials

Reference Sheets include required graphics that are to be printed and presented to the student during the administration of selected response items. Mathematics Reference Sheets for Sample Items are located in the front of this DTA. Constructed response (CR) items include cutouts that are to be printed and presented to the student during the administration of constructed-response items. The CR cutouts for Sample Items are also located in the front of this DTA. The TA may print additional Reference Sheets or CR cutouts as needed.
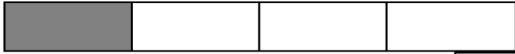
Directions

Know and follow all directions for test administration. The grey, italicized text directs the TA to point to specific parts of the item. If the item includes alternative text, grey italicized text inside brackets directs the TA to read the alternative text that describes the graphic to the student. All language referring to students with a visual impairment is inclusive of students who are blind or visually impaired.

Please see example below:

Mathematics Item Example

This item is about fractions. — *TA reads item directions to the student.*

This fraction bar is divided into 4 equal parts.
Point to each part. — *Directions for TA to point to each part.*

There is 1 part that is shaded. — *TA reads item text to the student.*
Point to the shaded part. — *Directions for TA to point to shaded part.*

This fraction shows that 1 of the 4 parts is shaded. — *TA reads item text to the student.*
Point to the fraction. — *Directions for TA to point to the fraction.*

$$\frac{1}{4}$$

There is 1 part shaded.
Point to the shaded part.

What part of the fraction is shaded?
Point to and read each option to the student.

A. $\frac{1}{2}$

B. $\frac{1}{4}$ — *TA reads answer choices to the student.*

C. $\frac{1}{8}$

Procedures for Constructed-Response (CR) Items

The CR tasks require students to construct an answer rather than select an answer from predetermined multiple-choice options. Constructed-response items are presented as novel tasks using materials and content presented in a test format that allows the TA to print out interactive materials and manipulatives for the student. Each item is presented to the student in a standardized, scripted sequence of steps, culminating in a TA's scoring of the student performance against the Mathematics Scoring Rubrics. The Mathematics Scoring Rubrics are included with the appropriate constructed-response items in the DTA and provide scoring standards that must be used to evaluate student responses.

Guidance on Administering the CR Items

- Become familiar with the specific test items and administration requirements.
- Rehearse administering each task before administering it to a student by reading the script for each task.
- Become familiar with the scoring rubric and directions for scoring the student response.
- Prepare the test setting.
    - Assemble any needed materials (pencils, markers, etc.).
    - Provide any allowable manipulatives (e.g., counters).
    - Have a calculator available, if allowed and/or if needed.
    - Provide materials required for student accommodations.
    - Locate the appropriate stimulus material.
    - Enlarge any stimulus materials, using the enlarge feature on a printer or copier, as needed.
    - Print all materials that the student will need (e.g., reference sheets, CR cutouts, etc.).
    - Cut the stimulus materials apart, as needed (e.g., CR tiles).
    - Position the student so that he or she will have the optimal vantage to view and manipulate materials in order to facilitate sustained attention.
    - Eliminate noise and visual distractions that may divert the student's attention.
- For students with a visual impairment/blindness, TAs may use tactile graphics or object replacements as needed.

Mathematics Grade 3

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Mathematics Sample Items Reference Sheets

Manipulatives and Instructional Materials

The following manipulatives and materials can be provided to the student during testing as necessary. The Reference Sheets and CR cutouts, or their adapted equivalents, must be provided as instructed in the DTA. Manipulatives and other materials provided during testing should be regularly used during instruction by the student. Do not introduce any manipulatives or other materials that the student is not familiar with shortly before or during testing.

Grade 3

Reference Sheet: Pattern 34 – Lightbulbs Table (Item 3)

Printed student response picture graph and tiles found in Mathematics Constructed-Response Cutouts section (Item 5)

TA may print additional reference sheets, as needed.

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Lightbulbs

Number of packages	Total number of lightbulbs
1	4
2	8
3	12
4	?

Reference Sheet: Pattern 34 – Lightbulbs Table

Mathematics Sample Items
Constructed-Response Cutouts

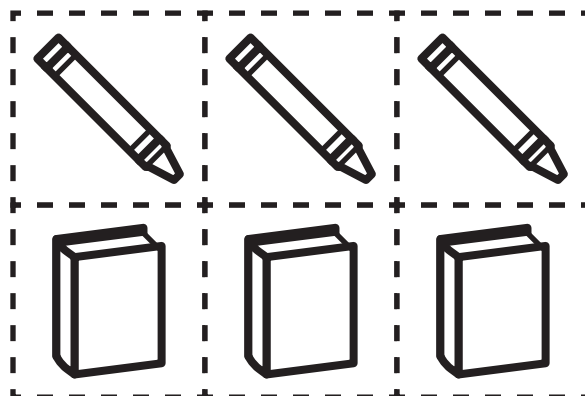TA may print additional CR cutouts, as needed.

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Sample Items - Constructed-Response Item 5

Please print this page prior to test administration for student completion of constructed-response item.

Favorite After-School Activity

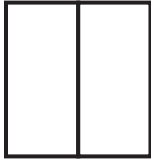| Activity	Number of votes
Biking	
Drawing	
Reading	

Mathematics
Beginning Grade 3

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Calculator may be used on this item.

Item 1

This rectangle was divided into two equal parts. Each part is the same shape and size.
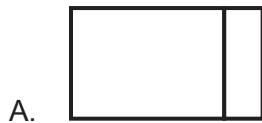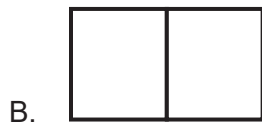
Point to each part.

Which rectangle has also been divided into two equal parts?

Point to each answer option.

[For students with a visual impairment, read "A. This is a rectangle that is divided into two smaller rectangles. The left rectangle is larger than the right rectangle."]

A.

[For students with a visual impairment, read "B. This is a rectangle that is divided into two smaller rectangles. The smaller rectangles are the same shape and size."]

B.

Calculator may not be used on this item.
Counters or other manipulatives may be used to solve the problem.

Item 2

There were 19 chairs in a classroom. The teacher put 7 chairs in the hallway.

Which equation shows how many chairs were still in the classroom?

Point to each answer option.

[For all students, read "A. Nineteen minus seven equals twelve."]

A. $19 - 7 = 12$

[For all students, read "B. Nineteen minus two equals seventeen."]

B. $19 - 2 = 17$

[For all students, read "C. Nineteen plus seven equals twenty-six."]

C. $19 + 7 = 26$

Calculator may be used on this item.
Please hand student Grade 3 Math Reference Sheet. Use Pattern 34 – Lightbulbs Table.

Item 3

Lightbulbs are sold in packages. This data table shows the total number of lightbulbs in different numbers of packages.

Point to the data table.

[For all students, read "The title of the table is Lightbulbs. The table has two columns and four rows. The first column is labeled Number of packages. The second column is labeled Total number of lightbulbs. First row, one package, four total lightbulbs. Second row, two packages, eight total lightbulbs. Third row, three packages, twelve total lightbulbs. Fourth row, four packages, unknown number of lightbulbs."]

Lightbulbs

Number of packages	Total number of lightbulbs
1	4
2	8
3	12
4	?

What is the total number of lightbulbs in 4 packages?

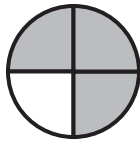*Point to and read each answer option.*

A. 13

B. 14

C. 16

Calculator may be used on this item.

Item 4

This fraction circle is divided into equal parts. Some parts are shaded.

Point to each part.

[For students with a visual impairment, read "This is a fraction circle that is divided into four equal parts. Three parts are shaded."]

What part of the fraction circle is shaded?

Point to each answer option.

[For all students, read "A. one out of four."]

A. $\dfrac{1}{4}$

[For all students, read "B. one out of three."]

B. $\dfrac{1}{3}$

[For all students, read "C. three out of four."]

C. $\dfrac{3}{4}$

Calculator may be used on this item.
Provide student with printed picture graph and tile cutouts.

Item 5

This data table shows how six students voted for their favorite after-school activity.

Point to the data table.

[For all students, read "The title of the data table is Favorite After-School Activity. There are two columns and three rows. The first column is labeled Activity. The second column is labeled Number of votes. First row, Biking, three. Second row, Drawing, one. Third row, Reading, two."]

Favorite After-School Activity

Activity	Number of votes
Biking	3
Drawing	1
Reading	2

This incomplete picture graph can be used to show the same information as the data table.

Place the picture graph and tiles onto the work surface in front of the student. Point to the title and labels of the picture graph.

[For all students, read "The title of the incomplete picture graph is Favorite After-School Activity. The picture graph has two columns and three rows. The first column is labeled Activity. The second column is labeled Number of votes. Row one, Biking, three bikes. The second and third rows have not yet been completed."]

Favorite After-School Activity

Activity	Number of votes
Biking	🚲 🚲 🚲
Drawing	
Reading	

The data table shows that 3 students voted for biking as their favorite after-school activity.

Point to the Biking row in the data table.

The picture graph also shows that 3 students voted for biking as their favorite after-school activity.

Point to the Biking row in the picture graph.

The data table shows that 1 student voted for drawing as his favorite after-school activity.

Point to the Drawing row in the data table.

The row labeled "Drawing" in the picture graph needs 1 crayon tile.

Move one crayon tile into the Drawing row in the picture graph.

Use the book tiles to show how many students voted for reading as their favorite after-school activity. You may not need all of the tiles.

Point to the picture graph.

Allow time for the student to respond.

After student completes work: *record on the computer if the student provided the correct answer or did not provide the correct answer.*

A. The student provided the correct answer.

B. The student did not provide the correct answer.

Score	Description
1	Student correctly places exactly two book tiles into the Reading row of the picture graph.
0	Student does not correctly place exactly two book tiles into the Reading row of the picture graph.

Sample Response

Favorite After-School Activity

Activity	Number of votes
Biking	
Drawing	
Reading	

Mathematics Grade 4

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Mathematics Sample Items Reference Sheets

Manipulatives and Instructional Materials

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Grade 4

Printed shapes and incomplete chart found in Mathematics Constructed-Response Cutouts section (Item 5)

TA may print additional reference sheets, as needed.

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Mathematics Sample Items
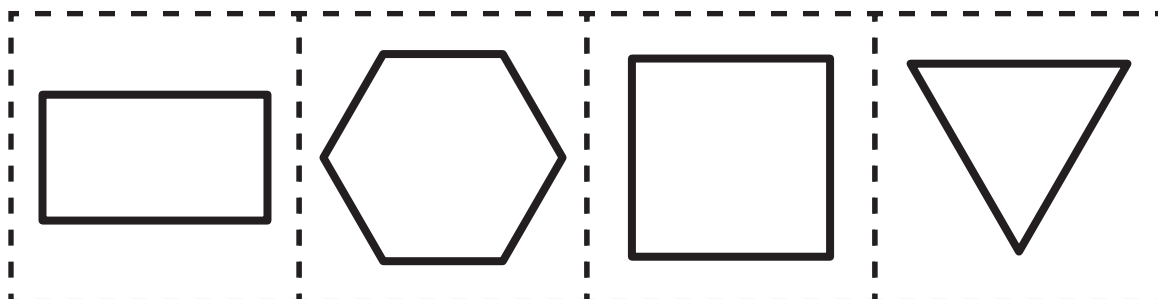# Constructed-Response Cutouts

TA may print additional CR cutouts, as needed.

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Sample Items - Constructed-Response Item 5

Please print this page prior to test administration for student completion of constructed-response item.

Shapes with 4 angles

Mathematics
Beginning Grade 4

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Calculator may be used on this item.

Item 1

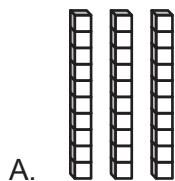This model shows the number 32.

Point to the model.

[For all students, read "This is three stacks of ten cubes and two more cubes on the right."]
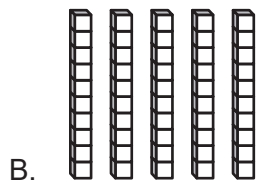

Which model is closer to the number 32?

Point to each answer option.

[For all students, read "A. This is three stacks of ten cubes showing the number thirty."]

A.

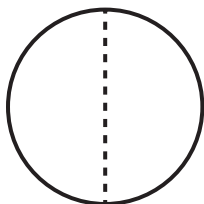*[For all students, read "B. This is five stacks of ten cubes showing the number fifty."]*

B.

Calculator may be used on this item.

Item 2
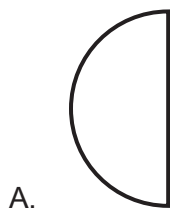
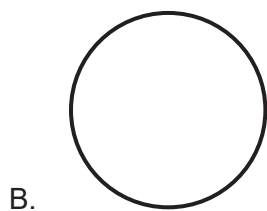This is a whole circle divided into two equal parts.

Point to the circle.

Which picture shows part of the circle?

Point to each answer option.

[For students with a visual impairment, read "A. This is half a circle."]

A.

[For students with a visual impairment, read "B. This is a circle."]

B.

Calculator may not be used on this item.
Counters or other manipulatives may be used to solve the problem.

Item 3

Sabrina had 27 beads.

Point to the beads.

OOOOOOOOOOOOOO
OOOOOOOOOOOOO

Sabrina put the beads into 3 equal groups.

How many beads did Sabrina put into each group?

Point to and read each answer option.

A.   4 beads

B.   9 beads

C.   14 beads
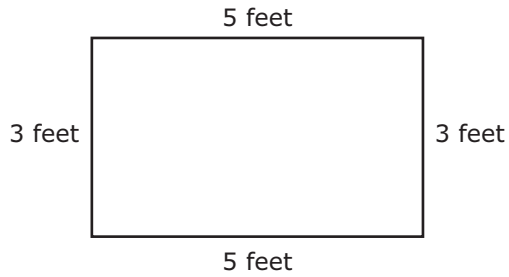
Calculator may be used on this item.

Item 4

Perimeter is the distance around a shape.

Alisha had a poster shaped like this rectangle with a length of 5 feet and a width of 3 feet.

Point to the rectangle.

5 feet

3 feet   3 feet

5 feet

What was the perimeter of Alisha's poster in feet?

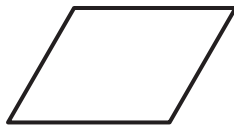*Point to and read each answer option.*

A.   8 feet

B.   15 feet

C.   16 feet

Calculator may be used on this item.
Provide student with printed shapes and incomplete chart.

Item 5

This is a parallelogram. It has 4 angles.

Point to the parallelogram.

Here are more shapes.

Place each shape onto the work surface in a line from left to right in front of the student.

[For all students, read "These are pictures of a rectangle, a hexagon, a square, and a triangle."]

This incomplete chart is for shapes with 4 angles.

Place the chart onto the work surface in front of the student.

[For students with a visual impairment, read "This is an incomplete chart with one column labeled Shapes with four angles."]

Shapes with 4 angles

Look at the number of angles each shape has. Select the shape or shapes with 4 angles and place them onto the chart.

Allow time for the student to respond.

After student completes work: *record on the computer if the student provided the correct answer or did not provide the correct answer.*

A. The student provided the correct answer.

B. The student did not provide the correct answer.

Score	Description
1	Student correctly places the shapes with four angles onto the chart.
0	Student does not correctly place the shapes with four angles onto the chart.

Sample Response

Shapes with 4 angles

Mathematics Grade 5

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Mathematics Sample Items Reference Sheets

Manipulatives and Instructional Materials

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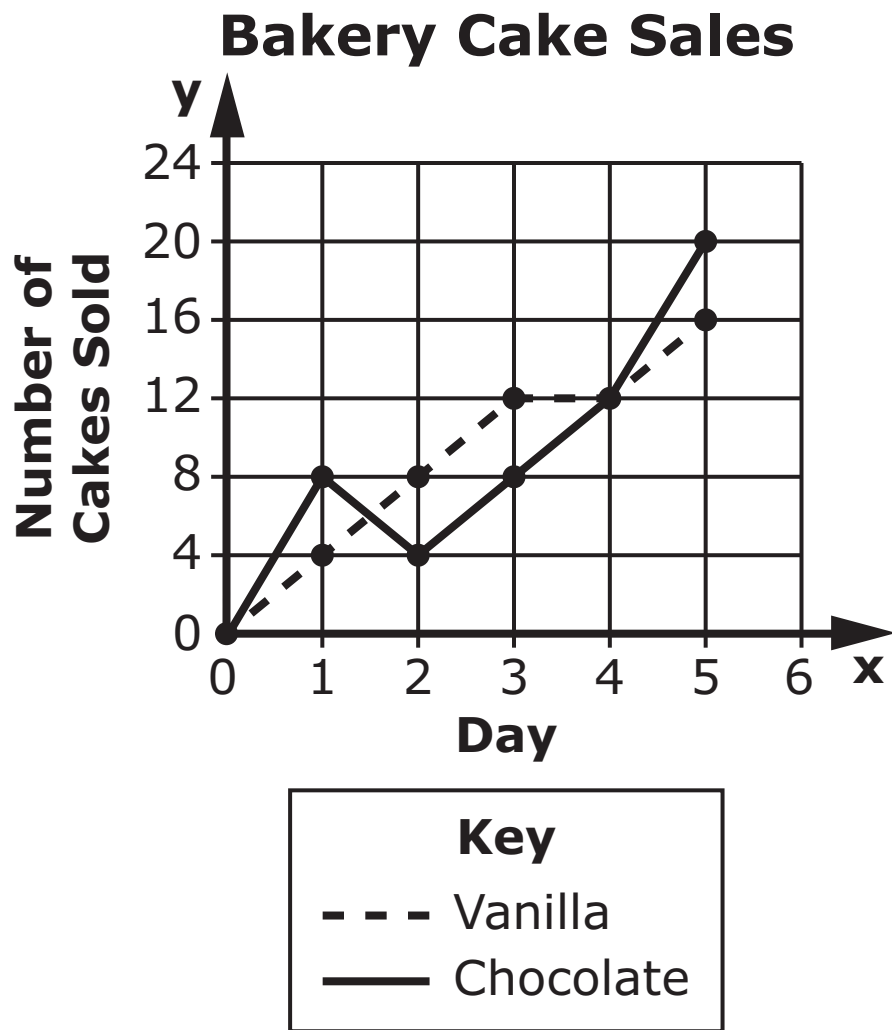
Grade 5

Reference Sheet: Graph 21 (Item 2)

Printed grid and small object/marker found in Mathematics Constructed-Response Cutouts section (Item 5)

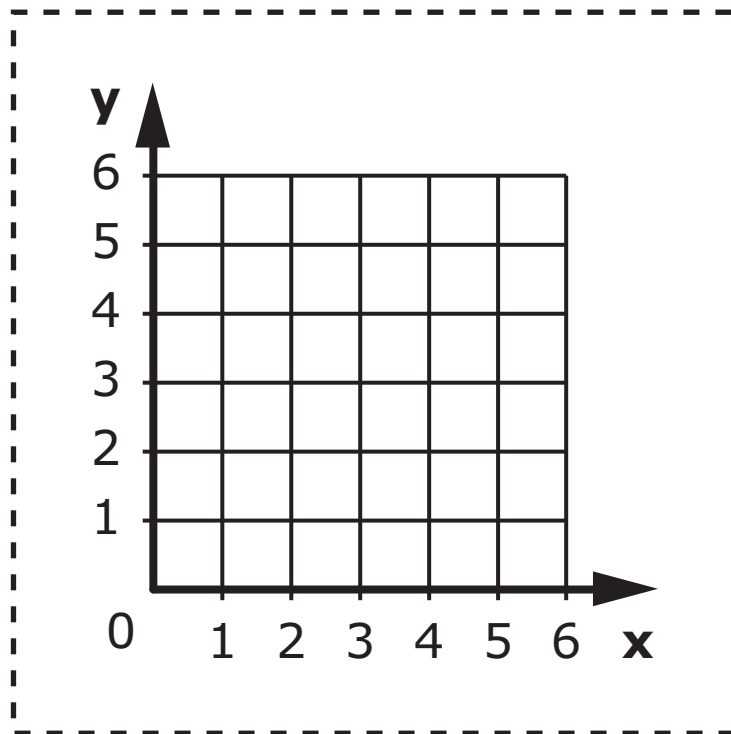TA may print additional reference sheets, as needed.

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Bakery Cake Sales

Key

--- Vanilla

—— Chocolate

Graph 21

Mathematics Sample Items
Constructed-Response Cutouts

TA may print additional CR cutouts, as needed.

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Sample Items - Constructed-Response Item 5

Please print this page prior to test administration for student completion of constructed-response item.

Mathematics
Beginning Grade 5

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Calculator may not be used on this item.
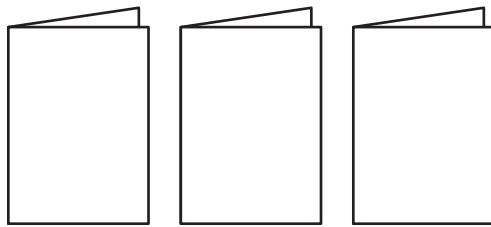*Counters or other manipulatives may be used to solve the problem.*

Item 1

Ella had 6 hearts.

Point to the hearts.

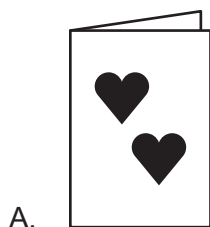♥ ♥ ♥ ♥ ♥ ♥

Ella had 3 cards.

Point to the cards.

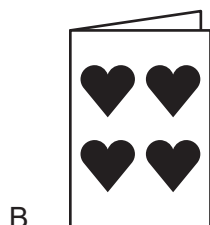Ella put the same number of hearts onto each card.

Which picture shows the number of hearts Ella put onto each card?

Point to each answer option.

[For students with a visual impairment, read "A. This is a picture of one card with two hearts on it."]

A.

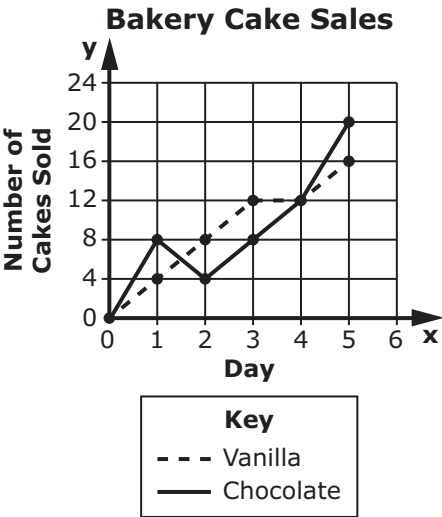*[For students with a visual impairment, read "B. This is a picture of one card with four hearts on it."]*

B.

Item 2

This graph shows the number of vanilla and chocolate cakes sold at a bakery over 5 days.

Point to each part of the graph as you read.

[For all students, read "This is a line graph titled Bakery Cake Sales. The x-axis starts at zero and has six equally spaced marks increasing by one moving to the right. It is labeled Day. The y-axis starts at zero and has six equally spaced marks that increase by fours moving upward. It is labeled Number of Cakes Sold. The key states that the dotted line on the graph shows the number of vanilla cakes sold and the solid line on the graph shows the number of chocolate cakes sold. There is a dotted line that starts at zero, zero and has the following points: one, four; two, eight; three, twelve; four, twelve; five, sixteen. There is a solid line that starts at zero, zero and has the following points: one, eight; two, four; three, eight; four, twelve; five, twenty."]

Bakery Cake Sales

On which day were the number of cakes sold equal?

Point to and read each answer option.

A. Day 2

B. Day 4

C. Day 7

Calculator may be used on this item.
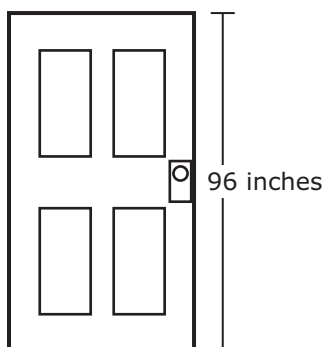
Item 3

There are 12 inches in 1 foot.

Point to the equation.

[For all students, read "Twelve inches equals one foot."]

12 inches = 1 foot

This door has a height of 96 inches.

Point to the picture of the door.

96 inches

What is the height of this door in feet?

Point to and read each answer option.

A. 7 feet

B. 8 feet

C. 9 feet

Calculator may not be used on this item.

Item 4

Marta had 7 squares. Each square had a height of

[For all students, read "three-eighths."]

$\frac{3}{8}$ of an inch.

This picture shows how Marta glued all of her squares together.

Point to the picture.

[For students with a visual impairment, read "This is a picture of seven squares glued together with no spaces in between to make one long rectangle."]

What was the height of all 7 squares, in inches, after Marta glued them together?

Point to each answer option.

[For all students, read "A. twenty-one eighths."]

A. $\frac{21}{8}$ inches

[For all students, read "B. thirty-nine eighths."]

B. $\frac{39}{8}$ inches

[For all students, read "C. fifty-nine eighths."]

C. $\frac{59}{8}$ inches
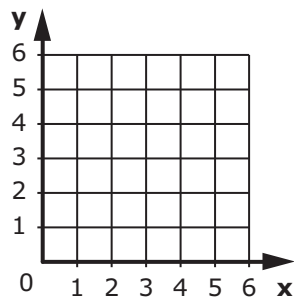
Calculator may be used on this item.
Provide student with printed grid and small object/marker.

Item 5

This is a coordinate grid and a small object.

> *Present the blank coordinate grid and a small object and place them onto the work surface in front of the student.*
>
> *[For all students, read "This is a grid. The x-axis starts at zero and has six equally spaced marks increasing by ones moving to the right. The y-axis starts at zero and has six equally spaced marks increasing by ones moving up."]*

This is an ordered pair.

> *Point to the ordered pair.*
>
> *[For all students, read "three, four."]*

$(3, 4)$

Use the small object to plot the point

> *[For all students, read "three, four."]*

$(3, 4)$

on the coordinate grid.

> *Allow time for student to plot the point.*
>
> **After student completes work:** *Record on the computer if the student provided the correct answer or did not provide the correct answer.*

A. The student provided the correct answer.

B. The student did not provide the correct answer.

Score	Description
1	Student correctly plots (3, 4).
0	Student incorrectly plots (3, 4).

Sample Response