

# Colorado Measures of Academic Success



# Grade 5 Mathematics



Paper Practice Resource for Students



## Paper Practice Resource for Students

The Colorado Measures of Academic Success (CMAS) is Colorado’s standards-based assessment program designed to measure the Colorado Academic Standards (CAS) in the content areas of science, social studies, English language arts, and mathematics. The sample items included in this resource provide students with an opportunity to become familiar with the format of test items that appear in the paper-based test books.

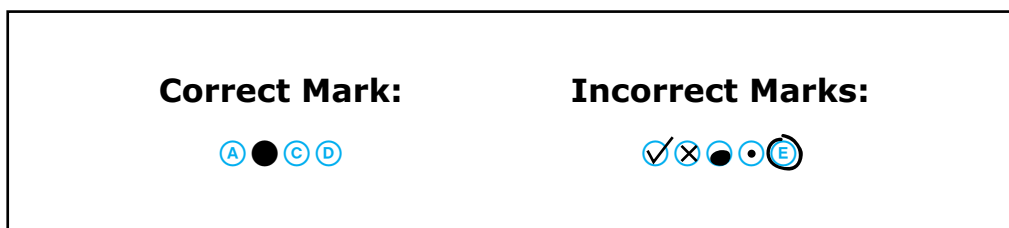
While the use of the sample items is not required, it is strongly encouraged to help ensure students are familiar with the types of items they may encounter while taking the paper-based test.

The sample item sets in the CMAS Practice Resources are not intended to be representative of a complete unit or test, nor are they intended to cover all assessed content or item types. To view assessment frameworks, high level blueprints, scoring rubrics, evidence statements and standards for the CMAS assessments, visit: [https://www.cde.state.co.us/assessment/cmas\\_testdesign](https://www.cde.state.co.us/assessment/cmas_testdesign).

### Item Types:

#### Selected Response Items

Selected response items are multiple choice questions. To respond, the student indicates their response in an answer grid or by filling in the circle(s) next to their answer choice.



#### Constructed Response Items

Constructed response items are questions or prompts that require an independent, written response. To respond, the student writes his or her answer in the response box in the test book.

## **Converted Online Technology-Enhanced Item Types**

Online technology-enhanced items converted to the paper testing format may ask students to:

- Circle the correct answer
- Complete a table with checkmarks, Xs, or letters from a list of answer choices
- Fill in the blank
- Draw lines from boxes to correct answers
- Complete a bar graph or histogram
- Interact with a number line
- Graph points and lines on a coordinate grid
- Divide and shade shapes to indicate fractions

## Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
3. Print only one number or symbol in each box. Do not leave a blank box in the middle of an answer.
4. Under each box, fill in the circle that matches the number or symbol you wrote above. Make a solid mark that completely fills the circle.
5. Do not fill in a circle under an unused box.
6. Fractions cannot be entered into an answer grid and will not be scored. Enter fractions as decimals.
7. See below for examples on how to correctly complete an answer grid.

### EXAMPLES

To answer 632 in a question, fill in the answer grid as shown below.

6	3	2			
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0	0
1	1	1	1	1	1
2	2	●	2	2	2
3	●	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
●	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

To answer .75 in a question, fill in the answer grid as shown below.

.	7	5			
●	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	●	5	5	5
6	6	6	6	6	6
7	●	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

OR

0	.	7	5		
<input type="radio"/>	●	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
●	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	●	5	5
6	6	6	6	6	6
7	7	●	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9



# ITEM SET 1

Use the information provided to answer Part A and Part B for question 1.

A farmer has two different-sized rectangular gardens.

**1. Part A**

The smaller garden has a length of 24 feet and a width of 9 feet.

What is the area, in square feet, of the smaller garden?

Enter your answer in the box.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9



**Part B**

The larger garden has a length of 132 feet and a width of 24 feet.

What is the area, in square feet, of the larger garden?

Enter your answer in the box.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

**2. Part A**

Which amount is greater than four hundred forty-five and fifty-seven hundredths?

- (A) Four hundred forty-five and five tenths
- (B) Four hundred forty-five and seven tenths
- (C) Four hundred forty-five and five thousandths
- (D) Four hundred forty-five and fifty-seven thousandths

**Part B**

What is four hundred forty-five and fifty-seven hundredths rounded to the nearest tenth?

Enter your answer in the box.

•	•	•	•	•	•
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

**TURN THE PAGE AND  
CONTINUE WORKING**

Use the information provided to answer Part A and Part B for question 3.

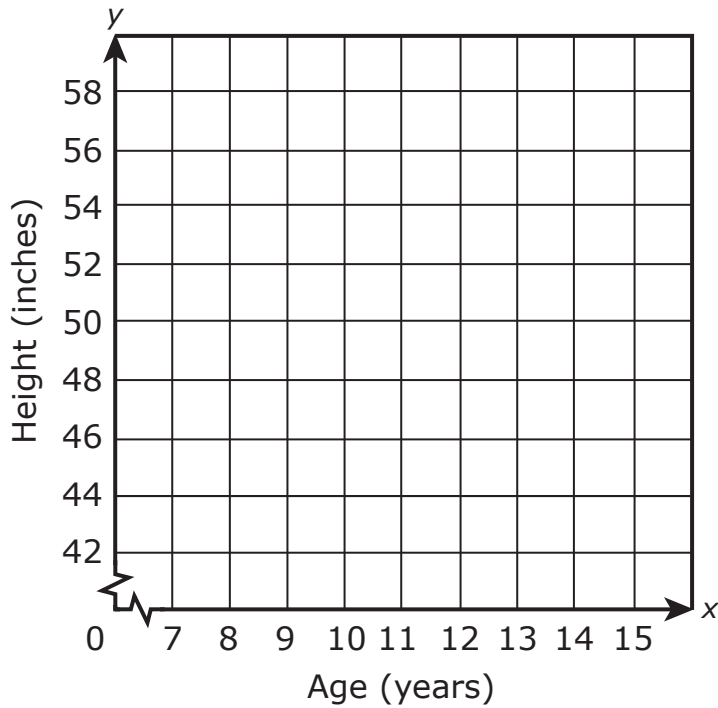
Four children are in line. Their age and height are shown in the table.

Child	Martha	Jason	Angie	Alex
Age (years)	12	15	10	14
Height (inches)	50	48	50	52

**3. Part A**

Graph the points for the age,  $x$ , in years, and height,  $y$ , in inches, of the four children.

**Age and Height of Children**



**Part B**

The park rules allow children who are 12 years or older and at least 50 inches tall to go on the water ride.

Which coordinate pair could represent the age and height of a child that can go on the ride?

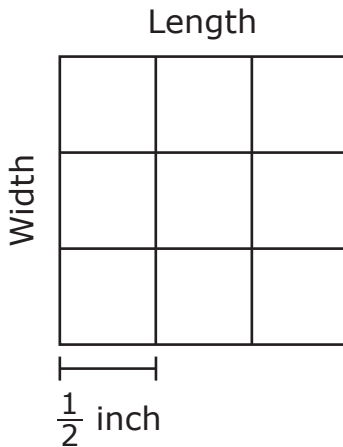
- A (11, 54)
- B (12, 44)
- C (13, 51)
- D (14, 49)

Use the information provided to answer Part A and Part B for question 4.

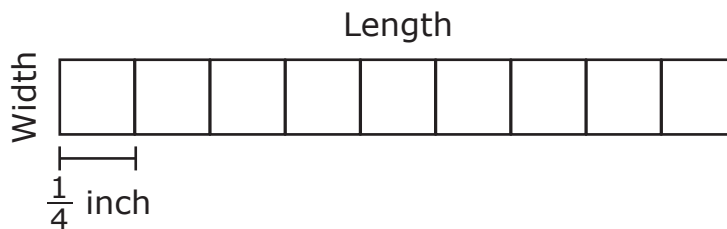
Student A and Student B created patterns using square tiles.

- The pattern created by each student is made up of 9 square tiles.
- Each tile in the pattern for Student A has a side length of  $\frac{1}{2}$  inch.
- Each tile in the pattern for Student B has a side length of  $\frac{1}{4}$  inch.

### Student A Pattern



### Student B Pattern

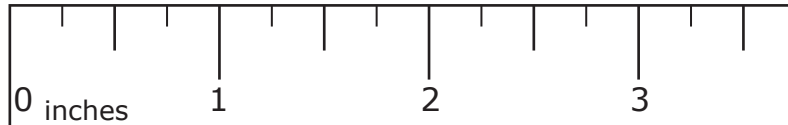


not to scale

**4. Part A**

What is the length, in inches, of the pattern for Student B?

Draw a line and shade the ruler to the correct length.



**Part B**

- Find the area, in square inches, of the pattern for Student A.
- Explain how to find the area of the pattern for Student B using a different method than the one used to find the area of the pattern for Student A.

Enter your answer and your explanation in the space provided.

5. What is the value of the expression  $\frac{11}{8} + \frac{1}{5}$ ?

(A)  $\frac{3}{10}$

(B)  $\frac{12}{13}$

(C)  $\frac{63}{40}$

(D)  $\frac{15}{8}$



**6. Part A**

A frog wants to reach a pond that is 10 feet away. The frog hops 5 times. Each hop is 18 inches.

How many more inches does the frog need to travel to reach the pond?

- A 30
- B 90
- C 102
- D 138

**Part B**

The frog has two ways to reach the pond. The frog could hop on grass for 10 feet or hop on the sidewalk for 4 yards and 1 foot to reach the pond.

Which statement is true?

- A The grass route is 72 inches shorter than the sidewalk route.
- B The sidewalk route is 5 feet shorter than the grass route.
- C The sidewalk route is 1 yard longer than the grass route.
- D The sidewalk route is 2 feet longer than the grass route.

**7.** Which inequalities are correct?

Select the **three** correct inequalities.

- A  $12.012 > 12.12$
- B  $12.071 < 12.12$
- C  $12.07 > 12.054$
- D  $12.076 > 12.54$
- E  $12.012 < 12.076$

8. Create a fraction model to show the answer to  $\frac{1}{2} \times \frac{3}{4}$ .

Divide the figure into the correct number of equal parts and then shade the correct number of parts.



**This is the end of Item Set 1.**

