Ohio Achievement Assessment Grade 6 Mathematics

Spring 2010

Answer Key and Scoring Guidelines

Grade 6 Mathematics Answer Key Spring 2010

Item			Content Standard	
No.	Туре	Content Standard	Benchmark	Key
1	Multiple choice	Data analysis and probability	E	С
2	Multiple choice	Patterns, functions and algebra	A	D
3	Multiple choice	Geometry and spatial sense	F	D
4	Multiple choice	Number, number sense and operations	I	Not for public release
5	Multiple choice	Measurement	С	В
6	Short answer	Number, number sense and operations	D	2 pt rubric
7	Multiple choice	Patterns, functions and algebra	С	Not for public release
8	Multiple choice	Measurement	F	Not for public release
9	Multiple choice	Data analysis and probability	K	D
10	Multiple choice	Geometry and spatial sense	D	Not for public release
11	Extended response	Number, number sense and operations	I	4 pt rubric
12	Multiple choice	Measurement	G	Not for public release
13	Multiple choice	Patterns, functions and algebra	K	Not for public release
14	Multiple choice	Measurement	F	С
15	Multiple choice	Number, number sense and operations	Н	D
16	Short answer	Geometry and spatial sense	D	Not for public release
17	Multiple choice	Data analysis and probability	А	C
18	Multiple choice	Patterns, functions and algebra	G	Not for public release
19	Multiple choice	Number, number sense and operations	D	Not for public release
20	Multiple choice	Geometry and spatial sense	Н	Not for public release
21	Short answer	Data analysis and probability	E	2 pt rubric
22 - 27		Field Test Items Not Used in Stude	ent Score	
28	Multiple choice	Number, number sense and operations	G	Not for public release
29	Multiple choice	Patterns, functions and algebra	G	В
30	Multiple choice	Number, number sense and operations	С	С
31	Short answer	Geometry and spatial sense	А	Not for public release
32	Multiple choice	Patterns, functions and algebra	М	D
33	Multiple choice	Number, number sense and operations	D	Not for public release
34	Multiple choice	Measurement	А	Not for public release
35	Multiple choice	Data analysis and probability	F	В
36	Extended response	Patterns, functions and algebra	E	Not for public release
37	Multiple choice	Geometry and spatial sense	А	Not for public release
38	Multiple choice	Number, number sense and operations	G	D
39	Multiple choice	Data analysis and probability	J	Not for public release
40	Multiple choice	Geometry and spatial sense	A	Not for public release
41	Short answer	Measurement	C	Not for public release
42	Multiple choice	Number, number sense and operations		С
43	Multiple choice	Patterns, functions and algebra	С	A
44	Multiple choice	Measurement	E	Not for public release
45	Multiple choice	Data analysis and probability	E	Not for public release

Limited = 0-12; Basic = 13-18; Proficient = 19-27; Accelerated = 28-34; Advanced = 35-50 Multiple Choice = 1 point; Short Answer = 2 points; Extended Response = 4 points 6. The chart shows the number of boys and girls in Ms. Martin's class.

В	В	В	В	
В	В	В	В	
G	G	G	G	B = BOY
G	G	G	G	9 = 911
G	G	G	G	

Ms. Martin asked Ashley and Jonathan to find a ratio related to the chart. Ashley gave the ratio 8:12 and Jonathan gave the ratio 8:20.

In your Answer Document, explain why both students are correct. (2 points)

Then, give a third ratio and explain how your ratio relates to the class.

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Points	Student Response			
2 point	Exemplar Response:			
	 Ashley is correct because she found the ratio of boys to girls. Jonathan is correct because he found the ratio of boys to the total number of students. Another ratio would be 12 to 20, which is the number of girls to the total number of students in the class. 			
	The focus of this task is providing an appropriate explanation for the correctness of			
	the ratios in a given situation. The response provides an accurate interpretation of			
	why both students are correct and provides a third ratio related to the class with an explanation.			
1 point	The response shows partial evidence of providing an appropriate explanation for the correctness of the ratios in a given situation; however, the solution may be incomplete			
	or slightly flawed.			
	Sample Response:			
	 Only provide that Ashley's ratio is the ratio of boys to girls. 			
	 Only provide that Jonathan's ratio is the ratio of boys to total number of students. 			
	 Provide an explanation that reverses the meaning of both given ratios (e.g., 			
	Ashley's ratio is girls to boys and Jonathan's ratio is total students to boys).			
	 Only provide a third ratio related to the class with an explanation. 			
0 point	The response provides inadequate evidence of providing an appropriate explanation			
	for the correctness of the ratios in a given situation. The response provides major			
	flaws in explanations or irrelevant information.			
	Sample Response:			
	Provide that there are 20 students in the class.			
	Only provide a third ratio without an explanation. Postete the information provided in the item			
	Restate the information provided in the item. Bo blank or give irrelevant information			

11. Bobby is helping his mother make a fruit salad. The sign shows the prices for the three kinds of fruit he needs for the fruit salad.

Bananas	3 for \$0.99
Pears	4 for \$1.28
Oranges	6 for \$1.50

Bobby's mother tells him that they need 5 bananas, 10 pears and 15 oranges for the salad.

In your **Answer Document**, determine the total cost for the amount of fruit that Bobby needs. Show or explain your work. (**4 points**)

Scoring Guidelines

Points	Student Response		
4 point	Sample Response:		
	 Bananas: \$0.99/3 = \$0.33. Each banana costs \$0.33. 5 × .33 = \$1.65Pears: \$1.28/4 = \$0.32. Each pear costs \$0.32. 10 × .32 = \$3.20Oranges: \$1.50/6 = \$0.25. Each orange costs \$0.25. 15 × .25 = \$3.75\$1.65 + \$3.20 + \$3.75 = \$8.60 		
	 I found that one banana costs 33 cents, so 5 bananas cost \$1.65. One pear costs 32 cents, so 10 pears cost \$3.20. One orange costs 25 cents, so 15 oranges cost \$3.75. Altogether, the fruit will cost \$8.60. 		
	The focus of the task is performing decimal computations to solve a multi-step problem. The response provides the correct total cost of the fruits needed and shows all work or gives an adequate explanation.		
3 point	The response provides adequate evidence of performing decimal computations to solve a multi-step problem. The response shows a minor error or flaw in a calculation or in an explanation. Sample Response: The response may:		
	Show evidence of a minor error in multiplication, division, or addition that is carried through to a conclusion.		
	 Show the process for finding the cost of one type of fruit AND the total cost, but lacks full details. 		
2 point	The response provides partial evidence of performing decimal computations to solve a multi-step problem. The response shows work with minor errors or flaws OR gives a vague explanation. Sample Response: The response may:		
	 Provide the cost per item with all work shown but not compute the total cost for all items needed. 		
	 Provide the correct cost for each item AND the total cost for all items needed, but fail to show work or provide an explanation. 		
	 Set up the problem correctly but show some inaccurate calculations, resulting in an incorrect answer. 		

1 point	The response provides minimal evidence of performing decimal computations to solve a multi-step problem. The response shows work with multiple errors or flaws or gives an inadequate explanation.		
	Sample Response:		
	The response may:		
	Provide the cost of each item in the table but not take into account the number		
	of each that was needed, giving an inaccurate total.		
	 Provide only an accurate total but show no work and give no explanation. 		
0 point	The response provides inadequate evidence of performing decimal computations to		
	solve a multi-step problem. The response provides major flaws in explanations or		
	gives irrelevant information.		
	Sample Response:		
	The response may:		
	• Show, 3 x .99 + 4 x 1.28 + 6 x 1.50 = 1709.		
	• State, "I found the total cost for the amount of fruit by adding \$0.99 + \$1.28 +		
	\$1.50. The total is \$3.77.		
	 Be blank or state unrelated statements. 		
	Recopy information from the question.		

21. The students in a class checked out library books for their book reports. All the books came from five categories: fiction, biography, science, history, and the arts.

The librarian wants to make a graph to show the teachers and students which categories of books were used most often by students for their book reports. She could create a bar graph or a circle graph.

In your **Answer Document**, state one advantage of using the bar graph and one advantage of using the circle graph to show the number of books the students choose from the five categories. (**2 points**)

Scoring Guidelines

Points	Student Response		
2 point	Exemplar Response:		
	 One advantage of the bar graph is that you can tell exactly how many books were checked out in each category. One advantage of the circle graph is that you can tell what fraction or percentage of the total books was checked out in each category. 		
	The focus of this task is demonstrating an understanding of the relative advantages of bar and circle graphs. The response provides an appropriate advantage for the bar graph and an appropriate advantage for the circle graph.		
1 point	The response shows partial evidence of understanding the relative advantages of bar and circle graphs; however, the solution may be incomplete or slightly flawed.		
	Sample Response:		
	The response may:		
	Only provide one appropriate advantage for only one of the graphs.		
0 point	The response provides inadequate evidence of understanding the relative advantages of bar and circle graphs. The response contains major flaws and errors of reasoning.		
	Sample Response:		
	The response may:		
	Provide inappropriate or incorrect advantages.		
	Restate the information provided in the item. Be black or give irrelevant information		