Ohio Grade 3 Mathematics Achievement Test

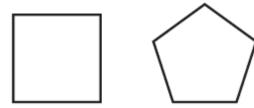
March 2005

Answer Key and Scoring Guidelines

Grade 3 Mathematics Answer Key March 2005

Item No.	Туре	Content Standard	Content Standard Benchmark	Key
1	Multiple Choice	Number, Number Sense and Operations	Α	Α
2	Multiple Choice	Measurement	D	В
3	Multiple Choice	Data Analysis and Probability	E	Α
4	Multiple Choice	Patterns, Functions, and Algebra	E	В
5	Short Answer	Geometry and Spatial Sense	Н	2 point rubric
6	Multiple Choice	Measurement	D	С
7	Multiple Choice	Number, Number Sense and Operations	L	С
8	Multiple Choice	Patterns, Functions, and Algebra	Α	В
9	Multiple Choice	Geometry and Spatial Sense	Α	Α
10	Short Answer	Patterns, Functions, and Algebra	Α	2 point rubric
11	Multiple Choice	Number, Number Sense and Operations	J	В
12	Multiple Choice	Data Analysis and Probability	F	В
13	Multiple Choice	Geometry and Spatial Sense	D	C
14	Multiple Choice	Patterns, Functions, and Algebra	F	В
15	Extended Response	Number, Number Sense and Operations	K	4 point rubric
16	Multiple Choice	Measurement	D	В
17	Multiple Choice	Number, Number Sense and Operations	G	A
18	Multiple Choice	Patterns, Functions, and Algebra	A	A
19	Multiple Choice	Geometry and Spatial Sense	E	C
20	Short Answer	Data Analysis and Probability	G	2 point rubric
21	Multiple Choice	Number, Number Sense and Operations	ī	A
22	Multiple Choice	Measurement	C	A
23	Multiple Choice	Patterns, Functions, and Algebra	A	В
24	Multiple Choice	Geometry and Spatial Sense	E	A
25	Short Answer	Number, Number Sense and Operations	L L	2 point rubric
26	Multiple Choice	Data Analysis and Probability	В	B B
27	Multiple Choice	Measurement	С	В
28	Multiple Choice	Geometry and Spatial Sense	E	С
29	Multiple Choice		F	В
30	·	Number, Number Sense and Operations	D	
31	Extended Response	Data Analysis and Probability	E	4 point rubric
32-37	Multiple Choice	Measurement		A
	Multiple Chaice	Field test questions not used in stude	C	Λ
38	Multiple Choice	Patterns, Functions, and Algebra	<u> </u>	A C
39	Multiple Choice	Number, Number Sense and Operations	G	
40	Multiple Choice	Geometry and Spatial Sense	J J	В
41	Multiple Choice	Number, Number Sense and Operations	L L	A
42	Short Answer	Patterns, Functions, and Algebra	В	2 point rubric
43	Multiple Choice	Geometry and Spatial Sense	E	В
44	Multiple Choice	Measurement	A	С
45	Multiple Choice	Number, Number Sense and Operations	В	С
46	Short Answer	Measurement 2 = 23-30: Proficient = 31-40: Accelerated = 4	D	2 point rubric

Limited = 0-22; Basic = 23-30; Proficient = 31-40; Accelerated = 41-45; Advanced = 46-52 Multiple Choice = 1 point; Short Answer = 2 points; Extended Response = 4 points 5. Draw two lines of symmetry for each shape. You may use your ruler.



Points	Student Response
2 point	The response shows two correct lines of symmetry for each shape with no incorrect lines.
	NOTE: The square may have a combination of vertical/horizontal and diagonal lines. The pentagon should only have lines from a vertex to the midpoint of the opposite side.
1 point	The response shows at least one correct shape with or without incorrect line(s). OR
	The response shows two correct lines of symmetry for one figure.
0 point	The response indicates no understanding of the concept or task.

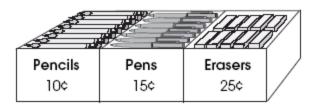
10.	Write	the	missing	numbers	to	continue	this	pattern.
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8, 10, 14, 20,_____,___

Describe the rule for this pattern.

Points	Student Response				
2 point	The response correctly completes the pattern and explains the rule correctly.				
2 point					
	8, 10, 14, 20, _28, 38				
	Examples of correct rules:				
	Growing pattern				
	 growing pattern by two more each time 				
	 add 2, then 4, then 6, then 8, then 10 				
	goes up by consecutive even numbers				
	• goes up by 2, 4, 6, 8, 10				
	 increase the number that goes up 2 more each time 				
	 going 2 more each time 				
1 point	The response completes the pattern but does not explain rule OR correctly				
	explains the rule but does not write the numbers correctly.				
	For example: 28, 38 the rule is add 2				
0 point	The response indicates no understanding of the concept or task.				

15. The school store sells pencils, pens and erasers. The picture shows the cost of each of these items.



Becky bought 2 pencils, 5 pens and 2 erasers. How much

money did Becky spend? _____

Show or explain your answer using pictures, words or numbers.

The next week Becky spent 85¢ in the store. Use the table below to show how she could spend exactly 85¢.

Item	Number	Total Cost
Pencils		
Pens		
Erasers		
		85¢

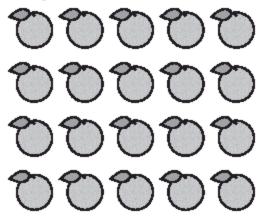
Scoring (Juidelines											
Points					Stude	nt Res	ponse					
4 point	The response indicates:											
	correct total											
			• • •		ork for first	•						
		•		th n	umber of	items a	nd costs	3				
		ole total	-									
	Examples	of corr	ect ansv	wers	3:							
	Part A:									• • •	_	
	10¢ +10¢	+15¢ +	15¢ +1)¢ +	15¢ +15¢	; + 25¢	+ 25¢ =	145	o¢ or 1.45	or \$1.4	5	
	OR	00. E	15 75.	2	25 50.0	00 . 75	. 50 4	1E 4	or 1 15 or	. 04 45		
	2 × 10 = 2 Part B: (a				•			45¢	or 1.45 or	\$1.45		
		•		JIIOW				l		-	10	
	Pencils	0	0		Pencils	1	10		Pencils	1	10	
	Pens	4	60		Pens	5	75		Pens	0	0	
	Erasers	1	25		Erasers	0	0		Erasers	3	75	
								_				
	Pencils	2	20		Pencils	3	30		Pencils	4	49	
	Pens	1	15		Pens	2	30		Pens	3	45	
	Erasers	2	50		Erasers	1	25		Erasers	0	0	
	Pencils	6	60		Pencils	7	70					
	Pens	0	0		Pens	1	15					
	Erasers	1	25		Erasers	0	0					
3 point	The respon	nse cor	npletes	3 of	the 4 bull	ets corr	ectly.					
2 point	The respon	nse cor	npletes	2 of	the 4 bull	ets corr	ectly.					
1 point	The respon						ectly.					
0 point	The respon	nse cor	npletes	no k	oullets cor	rectly.						
	<u> </u>											

José has a red shirt, a blue shirt and a white shirt. He also has an orange hat and a green hat.

Use words or pictures to show all the different ways José can wear one shirt and one hat.

Points	Student Response				
2 point	The response shows six different of pictures or words. Examples of correct responses: red shirt - orange hat red shirt - green hat blue shirt - orange hat blue shirt - green hat white shirt - orange hat white shirt - green hat	OR	of shirts and hats using G and W G and R G and B O and W O and R O and R		
1 point	The response shows one to five correct combinations of shirts and hats.				
0 point	The response indicates no understanding of the task or the underlying skills, concepts tasks or processes.				

 Six children share 20 oranges. Each child gets the same number of oranges.



How many oranges will each child get?

How many oranges will be left over?

Show or explain your answers using pictures, words or numbers.

Points	Student Response			
2 point	The response states each child gets 3 oranges with 2 left over and shows correct work or strategy. Examples of correct responses: • grouping 6 sets of 3 oranges • writing a description			
	• $20 \div 6 = 3 \text{ r } 2 \text{ or } 3\frac{2}{6} \text{ or } 3\frac{1}{3}$ • $20 - 6 - 6 - 6 = 2$ • $20 - 3 - 3 - 3 - 3 - 3 - 3 = 2$			
	 repeated addition numbers oranges 1 – 6 (groups of 6) labels oranges with 6 letters (groups of 6) OR			
	The response states each child gets an equal amount with the correct amount left over is also correct. For example: 2 each with 8 left over or 1 each with 14 left over.			
1 point	The response states 3 oranges each with or without the remainder and no or incomplete explanation/strategy.			
	OR The response shows a correct strategy with an arithmetic error			
0 point	The response shows a correct strategy with an arithmetic error. Response is incorrect or irrelevant.			
o point	response is incorrect of intelevant.			

30. This table shows the number of students in four classes.

Students in Classes

Teacher	Number of Students
Mrs. Gainey	18
Mr. Perez	20
Mrs. Brady	18
Mrs. Hicks	17

Directions:

Use the grid on the next page to create a bar graph to show the data in the table.

Be sure to show a scale for your graph.

Students in Classes

Namber of Students

Name Control of Man Broads Man Highs

Mrs. Gainey Mr. Perez Mrs. Brady Mrs. Hicks

Teachers

Write	two different facts about the information in the graph.
a.	
b.	

	Guidelines						
Points	Student Response						
4 point	The response creates the bar graph with a correct scale and bar heights and writes two different, correct facts based on the table or graph. For example:						
	Students in Classes						
	20						
	18						
	16						
	<u>\$</u>						
	14 12 10 10 8						
	10						
	g 8						
	2 6						
	4						
	2						
	Mrs. Gainey Mr. Perez Mrs. Brady Mrs. Hicks						
	Teachers						
	Acceptable facts:						
	 Any reference to the bar heights or numbers used in the table are ok Repetition of the information in the table is not correct 						
3 point	The response creates the bar graph with a correct scale and bar heights and						
	writes one correct fact based on the table or graph. OR						
	The response creates the bar graph with no more than two errors (scale						
	and/or bar height(s)), and writes two different, correct facts based on the table or graph.						
	NOTE:						
	Multiple unrelated bar height errors = # of errors One error in bar heights that is consistently carried through = 1 error						
2 point	Scale and bar height error = 2 errors						
2 point	The response creates the bar graph with a correct scale and bar heights OR writes two different, correct facts based on the table or graph.						
	OR						
	The response creates the bar graph with no more than two errors (scale and/or bar heights) AND writes one correct fact based on the table or graph.						
1 point	The response creates the bar graph with no more than two errors (scale						
0 point	and/or bar heights) OR writes one correct fact based on the table or graph. The response indicates no understanding of the task or the underlying skills,						
o point	concepts or processes.						

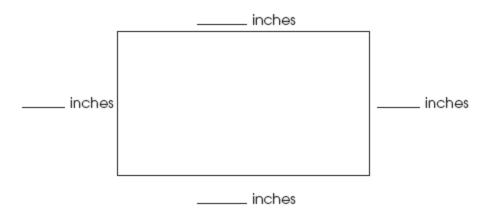
42. Ricky earned \$50 helping his neighbors. He spent \$4 each week for snacks from the money he earned.

How much money did Ricky have left after five weeks?

Use pictures, words or numbers to show how you found the amount of money Ricky had left after five weeks.

Points	Student Response
2 point	The response correctly answers \$30 or 30 AND provides correct work or
	strategy to support their answer.
	Examples of correct responses:
	• $50 - 4 - 4 - 4 - 4 - 4 = 30 \text{ or } \30
	• $4 \times 5 = 20$; $50 - 20 = 30$ or \$30
	• $50 - (4 \times 5) = 30 \text{ or } 30
1 point	The response correctly answers \$30 or 30 OR provides correct work or strategy with a computational or counting error. OR
	The response shows an incomplete strategy that could lead to a correct solution.
	For example: $4 \times 5 = 20$ OR $50 - 4 - 4 - 4 - 4 = 34$ (incomplete strategy must be shown)
0 point	The response indicates no understanding of the concept or task.

46. Use your inch ruler to measure each side of this rectangle. Write the length of each side of the rectangle on the blank lines.



Student Response
The response shows a correct measure of $3\frac{1}{2}$ and 2 for each pair of
opposite sides with no incorrect measures.
$\frac{3\frac{1}{2}}{}$ Inches
$\frac{3\frac{1}{2}}{\text{inches}}$
——— IIICHES
OR
$\frac{3\frac{1}{2}}{}$ Inches
inches inches
The response shows at least one side correctly labeled, or each pair of
opposite sides correctly measured in centimeters instead of inches
(9 cm and 5 cm).
The response indicates no understanding of the task or the underlying
skills, concepts, tasks, or processes.