Ohio Achievement Assessments
Grade 3 Mathematics

Spring 2010

Answer Key
and
Scoring Guidelines

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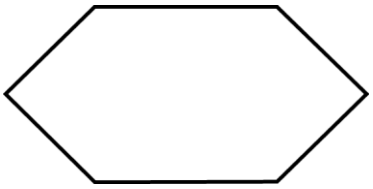
Answer Key
Spring 2010

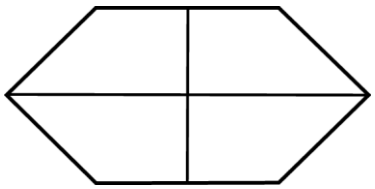
Item No.	Type	Content Standard	Content Benchmark	Key
1	Multiple choice	Number, number sense and operations	B	A
2	Multiple choice	Geometry and spatial sense	E	Not for public release
3	Multiple choice	Data analysis and probability	C	B
4	Multiple choice	Geometry and spatial sense	G	B
5	Short answer	Data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

Limited = 0-24; Basic = 25-32; Proficient = 33-41; Accelerated = 42-45; Advanced = 46-52
Multiple Choice = 1 point; Short Answer = 2 points; Extended Response = 4 points

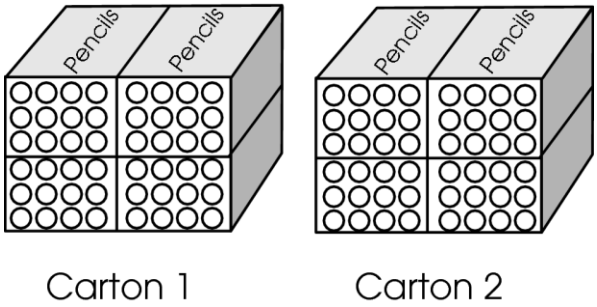
15. Draw two lines of symmetry on this shape. You may use your ruler.



Scoring Guidelines

Points	Student Response
2 point	The response shows two correct lines of symmetry; one is horizontal and the other is vertical (no incorrect lines are drawn). 
1 point	The response shows only one correct line of symmetry, either horizontal or vertical with or without incorrect lines. **OR** The response shows two correct lines of symmetry and incorrect line(s).
0 point	The response indicates no understanding of the concept or task.

20. A store has 2 cartons of pencils. There are 4 boxes in each carton and 12 pencils in each box.



How many pencils are in the two cartons? _____

Show or explain how you found the number of pencils.

Kevin said that if each box contained 20 pencils rather than 12, then there would be 16 more pencils in the 2 cartons.

State whether Kevin is correct and explain how you made your decision.

Scoring Guidelines

Points	Student Response
4 point	**Exemplar Response:** There are 2 x 4 x 12 or 96 pencils. Kevin is wrong. If each box had 20 pencils, there would be 160 pencils in all. This is 64 more pencils. The focus of this task is solving a multi-step problem involving the concepts of multiplication and subtraction. The response includes a correct explanation for why Kevin is wrong and supporting calculations or explanation.
3 point	The response provides evidence of solving a multi-step problem involving the concepts of multiplication and subtraction; however, the solution may contain a slight error, a flaw or a vague explanation. **Sample Response**: • Give the correct number of pencils, with support, and state that Kevin is wrong, with a minor calculation error in the supporting work. • Give an incorrect number of pencils with an adequate explanation based on the incorrect calculation, and state “no” with accurate support.

2 point	The response provides partial evidence of solving a multi-step problem involving the concepts of multiplication and subtraction; however, the solution is incomplete and/or contains flaws. **Sample Response**: • Show or explain the calculations for the number of pencils in the cartons but provide no response or an incorrect response to Kevin's claim. • Give the correct number of pencils, with support, and state that Kevin is incorrect, without mathematical support. • Give the correct number of pencils, with support, and state that Kevin is incorrect, with a mathematical explanation that is flawed.
1 point	The response provides minimal evidence of solving a multi-step problem involving the concepts of multiplication and subtraction. The response has major flaws and errors in reasoning. **Sample Response**: • Provide calculations that show a correct strategy (e.g., finds the number of boxes in two cartons, states the number of pencils in one carton), but does not state the number of pencils in the cartons. • Provide the correct number of total pencils with no supporting work.
0 point	The response provides inadequate evidence of solving a multi-step problem involving the concepts of multiplication and subtraction. **Sample Response**: • Show the number of pencils in the cartons by using division and provide an inadequate explanation of Kevin's mistake. • Only state that Kevin is incorrect. • Restate the information provided in the item. • Be blank or state irrelevant information.

29. Write the missing numbers to continue this pattern.

4, 8, 12, 16, ____, ____, ____

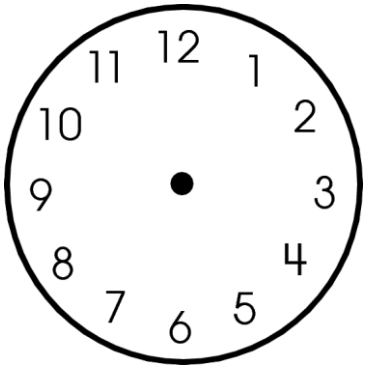
Describe the rule for this pattern.

Scoring Guidelines

Points	Student Response
2 point	The response correctly completes the pattern and describes the rule. **Sample Response**: 4, 8, 12, 16, **20**, **24**, **28** • Plus 4 • 4 is added to each number • The numbers are multiples of 4 • Shows number sentences using repeated addition.
1 point	The response finishes the pattern correctly, but does not explain the rule. **OR** The response explains the rule of repeated addition or multiples of 4 but does not have the correct numbers in the pattern.
0 point	The response indicates no understanding of the concept or task.

42. Ben starts mowing the lawn at 9:15 a.m. He mows for two hours. Write the time he finishes mowing the lawn.

Show this time on the clock.



Scoring Guidelines

Points	Student Response
2 point	The response states a correct time of 11:15 or 11:15 a.m. and draws the short hand to the 11 or shortly past the 11, **AND** draws the long hand to the 3. **Sample Response**: 11:15 or 11:15 a.m. and draws 11:15 on clock
1 point	The response states the correct time **OR** shows the correct elapsed time (11:15) on the clock. **OR** The response draws the hours and minutes hands correctly for the time given. **Sample Response**: 7:15, hands drawn to accurately reflect 7:15.
0 point	The response indicates no understanding of the concept or task.