Ohio Achievement Test
Grade 8 Mathematics

May 2007

Answer Key
and
Scoring Guidelines

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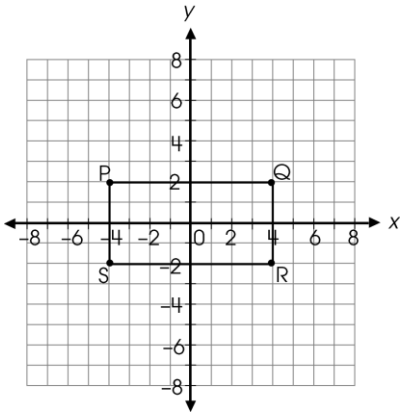
Item No.	Type	Content Standard	Content Standard Benchmark	Key
1	Multiple Choice	Measurement	D	Not for public release
2	Multiple Choice	Number, Number Sense, and Operations	B	Not for public release
3	Multiple Choice	Geometry and Spatial Sense	B	Not for public release
4	Multiple Choice	Data Analysis and Probability	A	D
5	Multiple Choice	Patterns, Functions, and Algebra	D	C
6	Short Answer	Measurement	E	Not for public release
7	Multiple Choice	Number, Number Sense and Operations	C	D
8	Multiple Choice	Geometry and Spatial Sense	A	D
9	Multiple Choice	Data Analysis and Probability	F	Not for public release
10	Multiple Choice	Patterns, Functions, and Algebra	E	Not for public release
11	Short Answer	Geometry and Spatial Sense	F	2 pt rubric
12	Multiple Choice	Measurement	D	Not for public release
13	Multiple Choice	Patterns, Functions, and Algebra	F	Not for public release
14	Multiple Choice	Data Analysis and Probability	B	A
15	Multiple Choice	Geometry and Spatial Sense	D	Not for public release
16	Short Answer	Patterns, Functions, and Algebra	H	Not for public release
17	Multiple Choice	Measurement	C	A
18	Multiple Choice	Number, Number Sense and Operations	A	C
19	Multiple Choice	Patterns, Functions, and Algebra	I	A
20	Multiple Choice	Geometry and Spatial Sense	E	Not for public release
21	Extended Response	Data Analysis and Probability	C	Not for public release
22 – 27	**Field test questions not used in student score**			
28	Multiple Choice	Number, Number Sense and Operations	H	B
29	Multiple Choice	Measurement	B	Not for public release
30	Multiple Choice	Patterns, Functions, and Algebra	J	C
31	Short Answer	Number, Number Sense, and Operations	G	Not for public release
32	Multiple Choice	Geometry and Spatial Sense	C	C
33	Multiple Choice	Patterns, Functions, and Algebra	E	Not for public release
34	Multiple Choice	Data Analysis and Probability	D	B
35	Multiple Choice	Number, Number Sense, and Operations	F	Not for public release
36	Short Answer	Geometry and Spatial Sense	D	Not for public release
37	Multiple Choice	Measurement	F	B
38	Multiple Choice	Patterns, Functions, and Algebra	A	C
39	Multiple Choice	Data Analysis and Probability	J	Not for public release
40	Multiple Choice	Geometry and Spatial Sense	D	Not for public release
41	Multiple Choice	Patterns, Functions, and Algebra	G	Not for public release
42	Multiple Choice	Measurement	E	A
43	Multiple Choice	Number, Number Sense, and Operations	I	Not for public release
44	Multiple Choice	Patterns, Functions, and Algebra	C	C

Limited = 0-9; Basic = 10-15; Proficient = 16-28; Accelerated = 29-36; Advanced = 37-46
Multiple Choice = 1 point; Short Answer = 2 points; Extended Response = 4 points

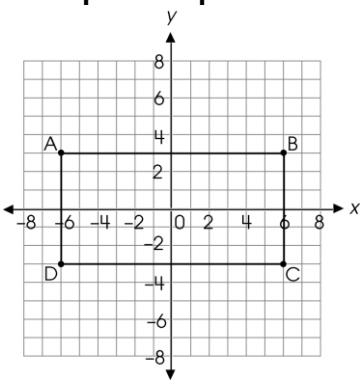
11. Rectangle PQRS is shown on the coordinate plane.



In your **Answer Document**, sketch rectangle ABCD centered at the origin to represent a dilation of rectangle PQRS by a scale factor of 1.5.

Then, state one characteristic of rectangle PQRS that does not change as a result of the dilation. (**2 points**)

Scoring Guidelines

Points	Student Response
2 point	The focus of this task is to draw the results of dilation about a fixed point and to state a characteristic of the object that remains fixed following the dilation. The response provides a grid with the dilated rectangle and states a characteristic that does not change as a result of the dilation. **Exemplar Response:**  All four angles still measure 90º. **OR** One characteristic that does not change is the ratio of length to width which is 2 in both rectangles. **NOTE**: • Vertex labels are not considered in scoring. • Characteristics may include but are not limited to: angles are 90 degrees, ratio of sides stays the same, opposite sides are parallel, adjacent sides are perpendicular. • Unacceptable responses: it is still a rectangle, the perimeter or the area stay the same.

1 point	The response shows partial evidence of drawing the results of a dilation about a fixed point and stating a characteristic of the object that remains fixed following the dilation; however, the solution may be incomplete or slightly flawed. **Sample Response:** The response may: • Provide a correct sketch of the dilated rectangle without a description of a characteristic that does not change. • Provide a correct statement about a characteristic of a dilation that does not change; however, the response does not provide a correctly drawn dilation of the rectangle or provides no dilation at all.
0 point	The response provides inadequate evidence of drawing the results of a dilation about a fixed point and stating a characteristic of the object that remains fixed following the dilation. The response contains major flaws and errors in reasoning. **Sample Response:** The response may: • Extend the rectangle 1.5 units in every direction. • Dilate the rectangle but move the center off the origin. • Incorrectly draw rectangle PQRS. • Restate the information provided in the item. • Be blank or give irrelevant information.