

**10th Mathematics Ohio Graduation Test
Geometry and Spatial Sense Standard**

Benchmark A

Question 5	Spring 2003	Short Answer – No Rubric Available
Question 21	Spring 2003	B
Question 13	Spring 2004	D
Question 3	Spring 2005	B

Benchmark B

Question 32	Spring 2003	C
Question 36	Spring 2004	D
Question 23	Spring 2005	C

Benchmark C

Question 1	Spring 2003	C
Question 1	Spring 2005	A

Benchmark D

Question 38	Spring 2003	A
Question 30	Spring 2004	A
Question 35	Spring 2005	A
Question 41	Spring 2005	C

Benchmark E

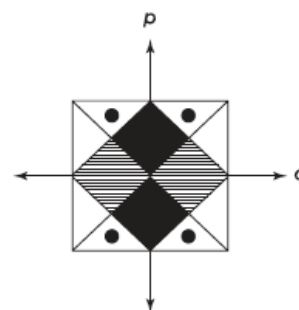
Question 13	Spring 2003	B
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Benchmark F

Question 28	Spring 2003		D
Question 10	Spring 2004	<p>Sample Response for Item 10 (Extended Response): To translate DEF to D"E"F," each vertex should be moved one unit to right and five units up.</p> <p>Scoring Guidelines for Item 10: Score point Description 4 points The focus of this item requires the student to correctly graph triangle DEF and perform the two translations in sequence. Finally, the student will identify the translation moves that would take triangle DEF to the third triangle in the sequence. Labeling is identified within the item and should be included within the response. The response shows triangle DEF and both</p>	

	<p>transformations clearly and correctly drawn, and all triangles DEF, D_E_F_, and D__E__F__ are appropriately labeled. An explanation is provided that correctly describes the transformation from triangle DEF to triangle D__E__F__ by translating each vertex one unit to the right and five units up. The work shown is organized and completely accurate.</p> <p>3 points The response clearly addresses the key aspects of the task; however, it includes errors in completing one or two of the components.</p> <p>For example, the response may:</p> <p>Show triangle DEF and both transformations correctly graphed and appropriately labeled, but the description of the transformation from DEF to D__E__F__ is missing or incorrect.</p> <p>OR</p> <p>Show triangle DEF graphed correctly and labeled. One transformation is done incorrectly, (example: D'E'F' moves to the left, or down) but everything else is correct, based on this error.</p> <p>OR</p> <p>Contain one minor error in any part of the process. For example, triangle DEF is graphed incorrectly; however, all other parts of the task are correct based on the incorrect triangle.</p> <p>OR</p> <p>Show triangle DEF and both transformations correctly graphed, but the labels are missing. The description of the transformation from DEF and D"E"F" is correct.</p> <p>2 points The response provides evidence of a partial correct answer and/or solution process. The response may adequately address some of the components of the task, but it contains major gaps or flaws in other components.</p> <p>For example, the response may:</p> <p>Show triangle DEF and one of the transformations graphed correctly, but the other transformation is either done incorrectly or is missing. The description given is related only to the one transformation or is missing.</p> <p>OR</p> <p>Show triangle DEF, and both transformations have been graphed correctly, but labels are missing and the description for the single transformation is unclear or missing.</p> <p>OR</p> <p>Show triangle DEF incorrectly graphed. Both transformations are consistent with the original graph, with or without labels. The description is incorrect based on the transformation or is missing.</p> <p>OR</p> <p>Show triangle DEF incorrectly graphed. One of the two transformations has an error, but is consistent with the original graph with or without labels. The description is correct based on the transformation.</p> <p>1 point The response omits significant aspects of the task. There is evidence of minimal understanding of the concepts involved in the task and/or solution process; however, the response includes significant errors in most of the components of the task.</p> <p>For example, the response may:</p> <p>Show triangle DEF correctly graphed, but both transformations are incorrect or missing.</p> <p>OR</p> <p>Describe the movements necessary for a single transformation, but</p>
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		<p>the graphs are omitted or incorrect. OR Show triangle DEF incorrectly graphed, but there is one correct transformation (two congruent triangles that match one of the translations mentioned in the questions). 0 Points The response indicates inadequate or no understanding of the task, and the task does not meet the requirements for one point.</p>
Question 6	Spring 2005	<p>Scoring Guidelines for Item 6: Score point Description 2 points The focus of the task is to draw reflections of the original design in each of the quadrants. The response shows the accurate reflections in each of the remaining three quadrants. 1 point The response shows a partial understanding of the solution process or key elements of the task. The response may contain gaps or flaws in determining the solution. For example, the response may: Show only two accurate reflections of the design in two of the three remaining quadrants OR Show two accurate reflections based upon an initial incorrect reflection OR Show three accurate reflections based on a slightly flawed original design OR Show accurate translation or rotation of the original design in each of the quadrants. 0 points The response fails to demonstrate minimal understanding of the task.</p>



Benchmark H

Question 7	Spring 2003	B
Question 33	Spring 2004	A

Benchmark I

Question 40	Spring 2003	B
Question 15	Spring 2005	D