

**Question 4th Mathematics Ohio Graduation Test
Data Analysis and Probability Standard**

Benchmark A

Question 4	May 2009	C
Question 2	March 2006	C

Benchmark B

Question 45	May 2009	C
Question 7	March 2008	C
Question 30	March 2006	B
Question 28	Spring 2007	B

Benchmark C

Question 35	Spring 2007	D
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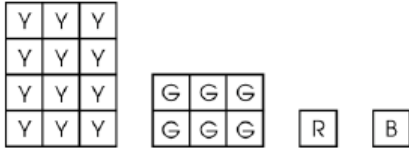
Benchmark D

Question 13	May 2009	C
Question 27	March 2006	C

Benchmark E

Question 20	March 2006	<p>Scoring Guidelines</p> <table border="1"> <thead> <tr> <th data-bbox="592 317 690 348">Points</th> <th data-bbox="690 317 1446 348">Student Response</th> </tr> </thead> <tbody> <tr> <td data-bbox="592 348 690 709">4</td> <td data-bbox="690 348 1446 709"> <p>The focus of the task is calculating relevant statistics for two sets of data and making and explaining a conclusion based on the statistics. The response provides a correct range for the girls and the boys, a correct median for the girls and the boys, a correct mode for the girls and the boys, and an accurate explanation of which group is taller.</p> <p>Sample correct response: Range: boys $58 - 47 = 11$, girls $58 - 49 = 9$ Median: boys = 53, girls = 55 Mode: boys = 53, girls = 56</p> <p>The girls are taller because the tallest girl is just as tall as the tallest boy and the range is smaller for the girls. OR The median height of the girls is higher, so half of the girls are taller than 55 inches and half of the boys are taller than 53 inches.</p> </td> </tr> <tr> <td data-bbox="592 709 690 1024">3</td> <td data-bbox="690 709 1446 1024"> <p>The response provides evidence of calculating relevant statistics for two sets of data and making and explaining a conclusion based on the statistics; however, the solution may contain a slight error, a flaw or an incomplete explanation.</p> <p>For example, the response may:</p> <ul style="list-style-type: none"> • Provide two out of the three correct statistics and provide an accurate explanation of the tallest group based on the statistics provided. • The response correctly determines the range, median, and mode but does not give an explanation, or uses a flawed reasoning to explain which group is taller. </td> </tr> <tr> <td data-bbox="592 1024 690 1276">2</td> <td data-bbox="690 1024 1446 1276"> <p>The response provides partial evidence of calculating relevant statistics for two sets of data and making and explaining a conclusion based on the statistics; however, the solution is incomplete and/or contains minor flaws.</p> <p>For example, the response may:</p> <ul style="list-style-type: none"> • Incorrectly determine two of the statistics but provides a reasonable explanation for which group is taller. • Have multiple calculation errors in determining the range, median, and mode but includes an explanation that uses only slightly flawed reasoning. </td> </tr> <tr> <td data-bbox="592 1276 690 1451">1</td> <td data-bbox="690 1276 1446 1451"> <p>The response provides minimal evidence of calculating relevant statistics for two sets of data and making and explaining a conclusion based on the statistics. 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Question 37	March 2006	B										
Question 8	Spring 2007	D										

Benchmark F

Question	Date	Scoring Guidelines	
		Points	Student Response
Question 10	May 2009	2 point	<p>Sample Correct Responses:</p>  <p>Yellow, Green, Red, Blue</p> <ul style="list-style-type: none"> Yellow, Green, Red and Blue. Red and blue are unlikely because there is only one of each; then green because there are 6 green tiles; and then yellow is most likely because there are the most yellow tiles. Yellow, Green, Red, Blue. The highest likelihood is picking yellow, 12/20, then green, 6/20, and then both red and blue, 1/20. <p>The focus of the task is to provide evidence of representing the likelihood of possible outcomes for chance situations. The response provides a list of colors in order of likelihood AND an explanation, numbers or diagram comparing the likelihood of drawing a tile using adequate mathematical language.</p>
		1 point	<p>The response provides partial evidence of representing the likelihood of possible outcomes for chance situations; however the solution may be incomplete or slightly flawed.</p> <p>Sample response:</p> <ul style="list-style-type: none"> State that the order of likelihood is yellow, green, then red and blue, but not provide an adequate explanation. Place the likelihood of drawing each color in an incorrect order, but have an explanation or diagram that supports the stated order.
		0 point	<p>The response provides inadequate evidence of representing the likelihood of possible outcomes for chance situations. The response provides major flaws in reasoning or irrelevant information.</p> <p>Sample response:</p> <ul style="list-style-type: none"> Place the colors in a random order with no or a highly flawed explanation. Be blank or state unrelated statements. Recopy information from the stem.
Question 12	March 2008		D
Question 26	March 2008		D
Question 30	March 2006		B

Benchmark G

Question 4	March 2008		C
Question 46	March 2006		B

Question 15	Spring 2007	The focus of this task is to show all possible outcomes using one member from each of two sets; each set contains three members. The response includes a list of all 9 combinations of one notebook and one pen with no incorrect combinations. Science and blue, Science and green, Science and red, Reading and blue, Reading and green, Reading and red, Writing and blue, Writing and green, Writing and red Note – Letters or symbols may be used to represent colors, i.e., b – blue. Tables with outcomes are also acceptable.
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Benchmark H

Question 8	March 2006		C
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