

**5th Mathematics Ohio Achievement Test
Patterns, Functions and Algebra Standard**

Benchmark A

Question 24	March 2006	C
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Benchmark B

Question 14	Spring 2009	D
Question 8	March 2008	D

Benchmark C

Question 42	Spring 2009	Scoring Guidelines	
		Points	Student Response
		2 point	The focus of this task is using variables to create and solve an equation that represents a problem situation. The response provides a correct equation and correctly solves the equation. Sample response: <ul style="list-style-type: none"> • $t = 3bt = (3 \times 7)t = \\21
		1 point	The response provides partial evidence of using variables to create and solve an equation that represents a problem situation; however, the solution may be incomplete or slightly flawed. Sample response: <ul style="list-style-type: none"> • Provide a correct equation but fail to find the correct cost. • Provide an incorrect equation, which is solved correctly. • Provide a correct solution without writing an equation with given variables, such as $3 \times 7 = 21$.
Question 33	March 2008	Scoring Guidelines	
		Points	Student Response
		2 point	The focus of this task is using variables as unknown quantities in equations when describing patterns and other relationships. The response provides the correct equation using the variables and the correct number of cards in 6 weeks. $70 + 10w = c$. Pam will have $70 + 10(6) = 130$ baseball cards in 6 weeks. $70 + 10w = c$. 130 cards in 6 weeks.
		1 point	The response shows partial evidence of using variables as unknown quantities in equations when describing patterns and other relationships; however, the solution may be incomplete or slightly flawed. For example, the response may: <ul style="list-style-type: none"> • Only provide the correct number of cards she will have in 6 weeks. • Only provide the correct equation.
		0 point	The response provides inadequate evidence of using variables as unknown quantities in equations when describing patterns and other relationships. The response provides major flaws in explanations or irrelevant information. For example, the response may: <ul style="list-style-type: none"> • State that she gets 10 cards each week. • Provide the equation $10w = c$. • Restate the information provided in the item. • Be blank or give irrelevant information.
Question	March	A	

2	2006	
Question 41	March 2006	A

Benchmark E

Question 6	March 2006	C														
Question 33	March 2006	<table border="1"> <thead> <tr> <th colspan="2">Scoring Guidelines</th> </tr> <tr> <th>Points</th> <th>Student Response</th> </tr> </thead> <tbody> <tr> <td>4</td> <td> <p>The focus of this task is using data in a table to draw conclusions and make predictions. The response includes a rule that accurately relates the size of the lawn and the time needed and uses the rule to explain how long it will take Ethan to rake a 150-square-foot lawn and the size of the lawn Ethan can rake in 65 minutes.</p> <p>Sample response:</p> <ul style="list-style-type: none"> The size of a lawn is 5 times the number of minutes it takes to rake it. <p>OR</p> <p>The time it takes to rake a lawn is $\frac{1}{5}$ the number of square feet in the lawn.</p> <p>AND</p> <p>$150 \div 5 = 30$. I predict it will take Ethan 30 minutes to rake a 150-square-foot lawn.</p> <p>AND</p> <p>$65 \times 5 = 325$. Ethan can rake a 325-square-foot lawn in 65 minutes.</p> <ul style="list-style-type: none"> The time increases by 10 minutes for each additional 50 square feet <p>AND</p> <p>150 square feet will take 30 minutes ($40 - 10 = 30$)</p> <p>AND</p> <p>Ethan can rake 325 square feet of lawn in 65 minutes ($300 + 25$, since it's halfway).</p> </td> </tr> <tr> <td>3</td> <td> <p>The response provides adequate evidence of using data in a table to draw conclusions and make predictions. 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Benchmark F

Question 36	Spring 2009	B
Question 3	March 2008	B
Question 45	March 2006	C
Question 27	Spring 2007	C

Benchmark K

Question 16	Spring 2007	C
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Benchmark L

Question 25	Spring 2009	Scoring Guidelines		B
		Points	Student Response	
		2 point	<p>The focus of this task is describing how the quantitative change in a variable affects the value of a related variable. The response provides an adequate description about the relationship between time and the number of pages read AND provides the correct time for reading 30 pages with supporting work or an adequate explanation.</p> <p>Sample response:</p> <ul style="list-style-type: none"> Morgan reads 5 pages every 15 minutes, or 1 page in 3 minutes ($15 \div 5 = 3$). 30 pages \times 3 minutes/pages = 90 minutes or, 1 and a half hours, to read 30 pages. Since Morgan reads 15 pages in 45 minutes, at this rate, she will double the number of pages in 90 minutes and read 30 pages ($15 \times 2 = 30$ and $45 \times 2 = 90$). 	
		1 point	<p>The response shows partial evidence of describing how the quantitative change in a variable affects the value of a related variable; however, the solution may be incomplete or slightly flawed.</p> <p>Sample response:</p> <ul style="list-style-type: none"> Only provide an accurate statement about the relationship between time and pages read. Only provide an accurate time for reading 30 pages. 	
0 point text	<p>The response provides inadequate evidence of describing how the quantitative change in a variable affects the value of a related variable. The response provides major flaws in explanations or irrelevant information.</p> <p>Sample response:</p> <ul style="list-style-type: none"> Provide a statement that Morgan reads 3 pages in 1 minute. Restate the information provided in the item. Be blank or give irrelevant information 			
Question 28	March 2008			