

**10th Mathematics Ohio Graduation Test
Patterns, Functions and Algebra Standard**

Benchmark A

Question 29	Spring 2003	A
Question 1	Spring 2004	D
Question 9	Spring 2004	C
Question 38	Spring 2004	C
Question 27	Spring 2005	C

Benchmark B

Question 7	Spring 2005	C
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Benchmark C

Question 20	Spring 2003	Extended Response, no rubric provided
Question 27	Spring 2004	C
Question 8	Spring 2005	B

Benchmark D

Question 3	Spring 2003	D
Question 14	Spring 2003	A
Question 12	Spring 2004	D
Question 26	Spring 2005	D

Benchmark E

Question 11	Spring 2003	D
Question 35	Spring 2003	Short Answer, No Rubric Provided
Question 7	Spring 2004	B
Question 2	Spring 2005	A

Benchmark F

Question 23	Spring 2003	A
Question 31	Spring 2003	C
Question 3	Spring 2004	B
Question 14	Spring 2004	B
Question 4	Spring 2005	B

Benchmark H

Question 18	Spring 2004	B
Question 32	Spring 2004	<p>Sample Response for Item 32 (Short Answer): $C = 500 + 20x$ or equivalent equation $Q = 800 - 15x$ or equivalent equation $500 + 20x > 800 - 15x$ $35x > 300$ $x > 8.57$ There will be more money in Cameron's account in the 9th week or after the 8th week or about 8 1</p>

2 weeks or between 8 and 9 weeks or the first week in March (assumes four weeks per month).
 Alternate solution processes for determining the number of weeks until Cameron will have more money in his account than Quinn include making a table (see example below) or graphing the equations.

Amount in Savings

Week	Cameron	Quinn
1	520	785
2	540	770
3	560	755
4	580	740
5	600	725
6	620	710
7	640	695
8	660	680
9	680	665

Score point Description

2 points The task includes two components—writing equations that represent the amount of money in each account for a variable number of weeks and determining the number of weeks until the amount of money in Cameron’s account is greater than that in Quinn’s account. The response contains accurate equations for finding the amount in each account for any number of weeks and indicates Cameron will have more money in his savings account than Quinn in week 9 (or other accurate response such as those provided in sample responses) with clear, accurate work or explanation.

1 point The response provides evidence of a partial answer and/or solution process. The response has an error(s) or does not carry out all parts of the task.

For example, the response may:

Provide correct equations for each account with an incorrect answer. Supporting work or explanation is incorrect or missing for the number of weeks until Cameron will have more money in his account than Quinn.

OR

Find the correct number of weeks with supporting work but does not provide two correct equations.

OR

Provide one correct equation and one flawed equation, but then determine an accurate number of weeks based upon the equations.

OR

Provide one correct equation with no additional work.

OR

Indicate the 9th week without any supporting work or equations.

0 points The response indicates inadequate or no understanding of the task and/or incorrect use of the key elements or information; e.g., writing an equation to represent a problem situation and finding a value that when used in both

		<p>equations meets a specified criteria. The response does not meet the criteria required to earn one point.</p> <p>For example, the response may: State an incorrect number of weeks with no supporting work or explanation OR Give two incorrect equations and no other work or explanation. OR Recopy information provided in the item with no work. OR Show no apparent understanding or relationship to the key components in the task or a possible solution process; e.g., finds the sum of the dollar amounts in the item. OR Be blank, or the student writes, "I do not know" or includes unrelated statements or work.</p>
Question 38	Spring 2005	C

Benchmark I

Question 26	Spring 2003	A
Question 14	Spring 2005	C

Benchmark J

Question 24	Spring 2005	<p>Sample Response for Item 24 (Short Answer): Find the average amount received every 5 days. $700 \div 4 = \\$175/5 \text{ days}$ $700 + 175 = 875$ on April 25. $875 + 175 = 1050$ on April 30 The tire company should reach their goal on the 28th or 29th of April because, by the 30th, they will have exceeded the goal. OR Find the average amount received every day. $700 \div 20 = \\$35/\text{day}$ $\\$35 \times 28 = \\980 on April 28. $\\$35 \times 29 = \\1015 on April 29. OR $\\$1,000 \div \\$35 = 228.57 \text{ days}$ The tire company should reach its goal during the day on the 29th. OR This response contains a description of how the diagram was used to estimate when the tire company would reach their goal on the (range of 28th to 30th) of April.</p>
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		<p>Scoring Guidelines for Item 24: Score point Description</p> <p>2 Points- The focus of this item is to determine the approximate date the company will meet the \$1,000 goal based on the current rate of giving. The response indicates a date from the 28th to the 30th of April with supporting work or detailed explanation based on the information provided in the item.</p> <p>1 Point- The response shows a partial understanding of the solution process or key elements of the task. The response contains gaps or flaws in determining the solution. For example the response may: Indicate the correct date but show no work or the reasoning may be flawed. OR Indicates a date outside the acceptable range resulting from an error in computation. An appropriate solution process is shown or explained. OR Contain a correct method for determining the date, but the date is incorrect or missing.</p>
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