

Functions

Instructional Focus: Produce inverse functions

	4 – Mastery	3 – Proficient	2 - Basic	1 – Below Basic	0 – No Evidence
Produce inverse functions (F.BF.4)	<p>Can extend thinking beyond the standard, including tasks that may involve one of the following:</p> <ul style="list-style-type: none"> • Designing • Connecting • Synthesizing • Applying • Justifying • Critiquing • Analyzing • Creating • Proving 	<p>Compose functions to verify if one function is the inverse of another function</p> <p>Read values of an inverse function from a graph and table</p> <p>Produce an invertible function from a non-invertible function by restricting the domain so that the function is one-to-one</p>	<p>Compose functions to verify if one function is the inverse of another function</p> <p>Read values of an inverse function from a graph and table</p> <p>Identify a domain that that will produce an invertible function from a non-invertible function</p>	<p>Given a simple function, find its inverse</p> <p>Read values of an inverse function from a graph or table</p> <p>Identify if a function is invertible from a graph</p>	<p>Little evidence of reasoning or application to solve the problem</p> <p>Does not meet the criteria in a level 1</p>

F.BF.4 Find inverse functions.

b. (+) Verify by composition that one function is the inverse of another.

c. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.

d. (+) Produce an invertible function from a non-invertible function by restricting the domain.

Functions

Instructional Focus: Graph and interpret rational functions

	4 – Mastery	3 – Proficient	2 - Basic	1 – Below Basic	0 – No Evidence
<p>Identify key features of graphs (F.IF.7) The concentration C (in mg/dl), of a certain prescription drug in a person's bloodstream is determined using the rational function:</p> $C(t) = \frac{50t}{t^2 + 25}$ <p>where t is the time (in hours) after taking the prescription drug What is the equation of the horizontal asymptote for the graph of the function? What does this value (and the fact that it is an asymptote) represent in the context of this problem?</p>	<p>Can extend thinking beyond the standard, including tasks that may involve one of the following:</p> <ul style="list-style-type: none"> • Designing • Connecting • Synthesizing • Applying • Justifying • Critiquing • Analyzing • Creating • Proving 	<p>Graph rational functions, given the model, and interpret all related key features of a graph in context of a real world situation.</p> <ul style="list-style-type: none"> • equations of asymptotes • intercepts (x and y) • end behavior 	<p>Graph rational functions, given the model, and identify all related key features of a graph.</p> <ul style="list-style-type: none"> • equations of asymptotes • intercepts (x and y) • end behavior 	<p>Given the graphs of rational functions, identify all related key features of a graph.</p> <ul style="list-style-type: none"> • equations of asymptotes • intercepts (x and y) • end behavior 	<p>Little evidence of reasoning or application to solve the problem</p> <p>Does not meet the criteria in a level 1</p>

F.IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. ★

d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.