

Figure 4.2: Sample Domain and Cluster in the High School CCSS for Mathematics

Conceptual category: Functions

Domain: Interpreting Functions (F-IF)

Cluster: Analyze functions using different representations.

Learning targets: Graph functions expressed symbolically, and show key features of the graph, by hand in simple cases and using technology for more complicated cases.

- a. Graph linear and quadratic functions and show intercepts, maxima, and minima.
- b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute-value functions.
- c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.
- d. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available and showing end behavior.
- e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.

Source: Adapted from NGA & CCSSO, 2010, p. 69.