| **Content: Functions** | **Grade Level: 8** |
|---|---|

**Standard: 8.F.1**

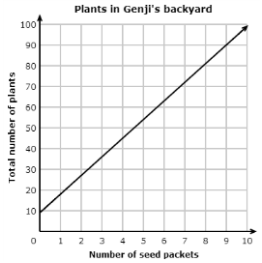
Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.

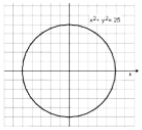
**I can:**

- evaluate a function.
- understand that in a function, each input has only one output.
- describe the domain and range of a function.
- determine whether a given graph or table represents a function.

| | | | **Sample Activities** |
|---|---|---|---|
| **Score 4.0** | **In addition to achieving level 3.0 content, the student makes in-depth inferences and applications that go beyond what was taught.** | | • Construct a table and graph to represent a relationship that is not a function.<br>• Determine whether $x = y^2$ is a function. |
| | **3.5** | In addition to achieving level 3.0 content, the student has partial success with level 4.0 content. | |
| **Score 3.0** | **The student:**<br>• completes an input-output table accurately;<br>  ○ including equations with negatives and rational numbers.<br>• graphs a function from a table.<br>• interprets the graph of a function.<br>• determines whether or not a given table and graph represent a function.<br>• state the domain and range of a function when given a table or graph.<br>**The student exhibits no major errors or omissions.** | | • Complete the table for **y = $-\frac{1}{2}$x – 3** and graph the function.<br>• With 9 seed packets, how many total plants can Genji have in his yard?<br>• Does the graph below represent a function? Explain. |
| | **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of the 3.0 content. | |
| **Score 2.0** | **There are no major errors or omissions regarding the simpler details and processes.**<br>• Students can accurately complete a table involving only positive integers.<br>• Students can state the domain and range when given a table.<br>• Students make some errors when completing an input-output table.<br>• Students make some errors when graphing the function.<br>**However, the student exhibits major errors or omissions regarding the more complex ideas and processes.** | | • Complete the table for y = 2x + 2 and state the domain and range. |
| | **1.5** | Partial knowledge of the 2.0 content, but major errors or omissions regarding the 3.0. | |
| **Score 1.0** | **With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.** | | |
| | **0.5** | With help, a partial understanding of the 2.0 content, but not the 3.0 content. | |
| **Score 0.0** | **Even with help, no understanding or skill demonstrated.** | | |

| **x** | -1 | 0 | 1 | 2 |
|---|---|---|---|---|
| **y** | | | | |



| **x** | -1 | 0 | 1 | 2 |
|---|---|---|---|---|
| **y** | | | | |