**Function Applications – Free Throws**

Ben is trying out for the school’s Basketball team. He has been shooting free throws after school for an entire week, trying to get better. He shot 100 free throws on the first day, and then each day after that he shot 10 more free throws than the day before. **Create a function that models** the number of free throws ***f*** taken each day according to the day number ***d***.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Independent variable:
2. Dependent variable:
3. Write the equation for this function:
4. Use function notation to express the function:
5. We can say \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a

function of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.1. Find the number of free throws Ben shot on day 4. Use function notation.
2. Find the day that Ben shot 160 free throws.
3. What are the domain and range of this function?
 | 1. Complete the table below.

|  |  |
| --- | --- |
| **Input** | **Output** |
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|  |  |
|  |  |
|  |  |

 1. Graph the function on the axes below. Scale and label the axes.

 C:\Users\TRAVEL\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\G5RXD1SG\highway version c.png  |

1. Write a sentence to express the meaning of the following equation. *f*(0) = 100
2. Identify the shape of this graph using the Parent Function Reference Sheet.