**Function Applications – Height of a Ball**

Ben’s free throw follows a curved path. It goes up and then comes back down. The height of the ball ***h*** (in meters) at time ***t*** (in seconds) is given by the equation .

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| 1. Independent variable: 2. Dependent variable: 3. Use function notation to express the function: 4. We can say \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a   function of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.   1. Find the height of Ben’s shot after 1.5 seconds. Use function notation. 2. Find the time it takes for Ben’s shot to be 6 meters above ground. 3. What are the domain and range of this function? 4. Describe the shape of this graph. Use the Parent Function Reference Sheet. | Complete the table below:   |  |  | | --- | --- | | **Time**  **(seconds)** | **Height (meters)** | | 0 |  | | .4 |  | | .8 |  | | 1.0 |  | | 1.2 |  | | 1.6 |  | | 2.0 |  |   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 |