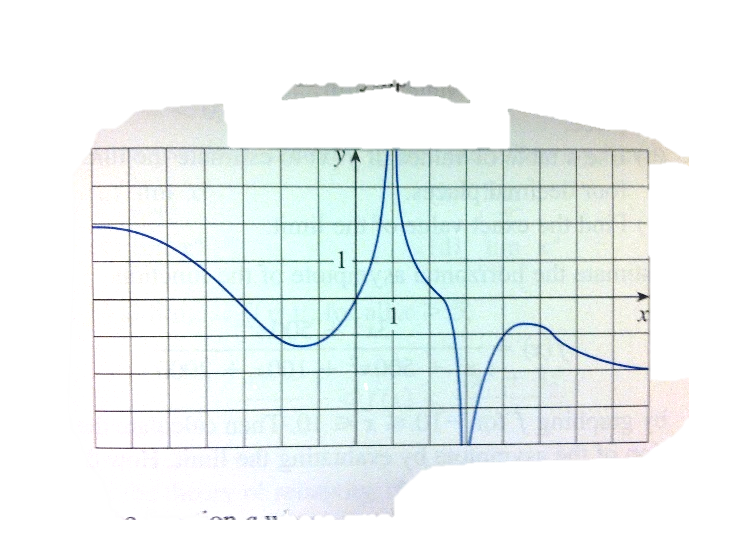
1. Use Graph 1 to find the next limits.

Graph 1

As increases without end, becomes .



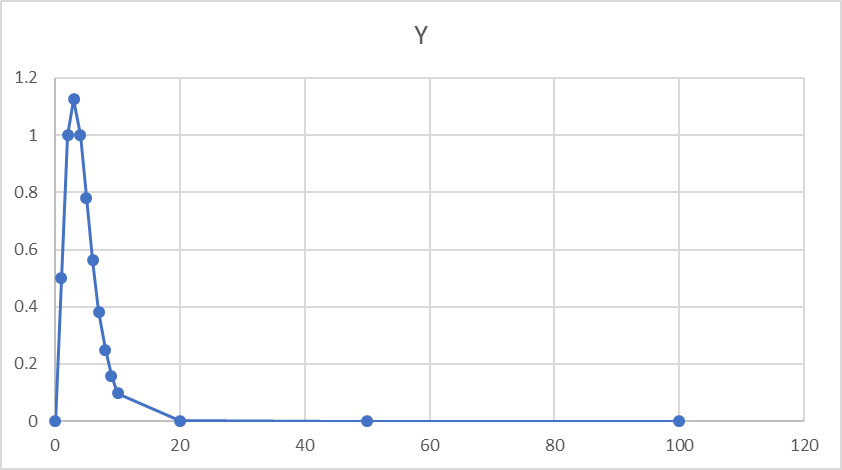
As increases without end, becomes .

As approaches , increases without limit.

As approaches 3, decreases without limit.

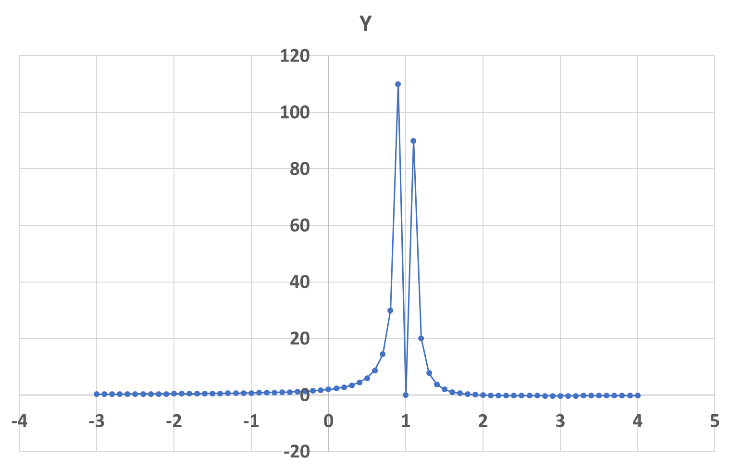
* 1. The equations of the asymptotes

|  |  |
| --- | --- |
|  |  |
| 0 | **0** |
| 1 | **0.5** |
| 2 | **1** |
| 3 | **1.125** |
| 4 | **1** |
| 5 | **0.78125** |
| 6 | **0.5625** |
| 7 | **0.382813** |
| 8 | **0.25** |
| 9 | **0.158203** |
| 10 | **0.097656** |
| 20 | **0.000381** |
| 50 | **2.22E-12** |
| 100 | **7.89E-27** |

1. Find the value of by evaluating the function by plugging 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 50, and 100 into . Then use a graph to support your answer. See the table to the right and Graph 2.

Graph 2

.

1. Find .

Graph 3

Looking at Graph 3, as approaches , it appears that increases to infinity.

1. Find .