**Proof of 6 seconds traversal of the bugs**

Total Height to Cover: 420px in 6000ms(6 seconds)

In order to find how many how the interval time to increment 1 px we can use ratio to solve this problem.

A : B = C : D

|  |  |  |  |
| --- | --- | --- | --- |
| 420px | 6000ms | 1px | ? |

Answer:

420 : 6000 = 1 : **14.285714285714**

Solution:  
  
Since  
420 : 6000 = 1 : X  
  
Then we know  
6000/420 = X/1  
  
Multiplying both sides by 1 cancels on the right  
1 × (6000/420) = (X/1) × 1  
1 × (6000/420) = X  
  
Then solving for X  
X = 1 × (6000/420)  
X = 14.285714285714  
  
Therefore  
420 : 6000 = 1 : 14.285714285714

The above answer suggests that the ideal interval time should be 14.28ms when rounded that gives us **14ms.**

Therefore, the slider and the timing interval is set be default to 14ms to meet the criteria as per the assignment brief.

Source of calculation answer: <https://www.calculatorsoup.com/calculators/math/ratios.php>