Application of Derivatives Part One

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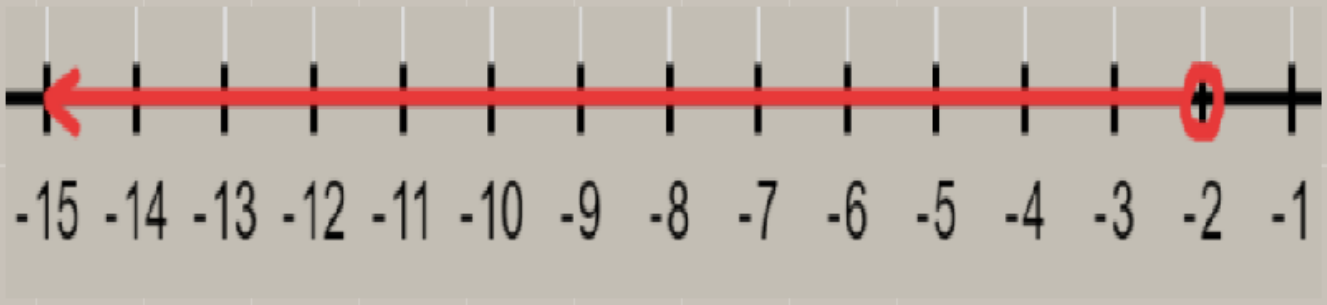
1 Application of Derivatives Part One 3

1.1 Sketching

1.2 Velocity and Acceleration

1.3 Other Applications

$$5x + 7 < 3(x + 1)$$



1. Application of Derivatives Part One

1.1 Sketching

It is important to sketch out the function in the question to reveal all of its qualities (increasing/decreasing intervals, concave up/down, inflection points, etc). There is an algorithm to determine all of the details of the graph.

1. From the original graph:
   - You must first **factor** to check if any **holes** are in the graph.
   - State **VA's** and **Domain**.
   - Find the **end behaviour**.
   - Look at the behaviour near **zeros** (x-intercepts) and **VA's**. (Remember - do this by looking at multiplicities of zeros)
   - *CAN BE SKIPPED* - Find **postive and negative intervals** between zeros and VA's.

1.2 Velocity and Acceleration

1.3 Other Applications