Another one down, now jump with glee - you solved riddle number 3!

The Challenge:

"Did you think you could do an engineering scavenger hunt and NOT do math? Solve these four questions to continue."

6/2(1+2)=?

Al+

 H_2+

What is the second derivative of $f(x) = 3x^3 + 2x^2$?

 $HCl \rightarrow AlCl_3 +$

 H_2O

 H_2

Balance the following chemical equation:

Balance the following chemical equation:

 ${
m O}_2
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Clue #4

"Professors do more than teach, they have research areas that are niche. This prof focuses on topics like Fluid Mechanics Thermodynamics, Sustainable Energy, and External Heat Engines."