

# Goal and idea - Module 7

## **GOAL:**

For the final 1st-order DE in which we study, we turn to 1st-order homogeneous DEs and the technique of 'substitution.'

To do so, we:

- Define what 1st-order homogeneous equations are, and determine whether a DE is such an equation.
- Discuss how to solve such differential equations.
- Briefly discuss the unfortunate fact that we see another type of DE called 'homogeneous' later in the class that is very different from this current case.

## **IDEA:**

By substituting variables, we are able to alter certain DEs (1st-order homogeneous DEs) into a separable equation which we can solve. We then re-substitute our variables to find a solution for the original equation.