

§9.3 Separable Equation

In-class Activity 9.3



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Find the general solutions of the following separable equations:

(a) $y \frac{dy}{dx} - x = 0$

(b) $y' = -ty$

Activity 2:

(a) Solve the IVP:

$$y' = \frac{xy^3}{1+x^2}; \quad y(0) = -1$$

(b) Discuss the maximal interval where the solution exists (called an **interval of validity**).