

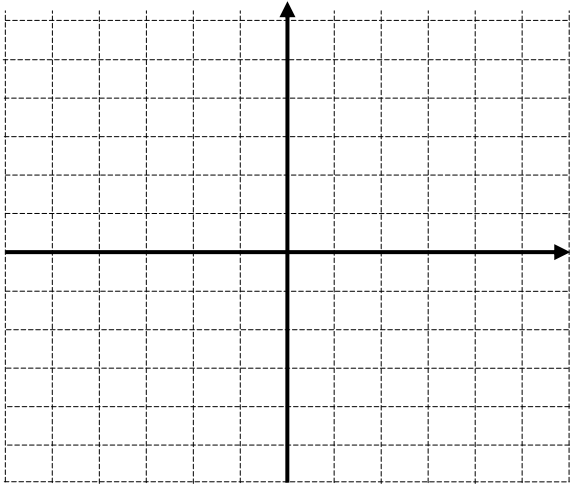
Student Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Slope Field worksheet

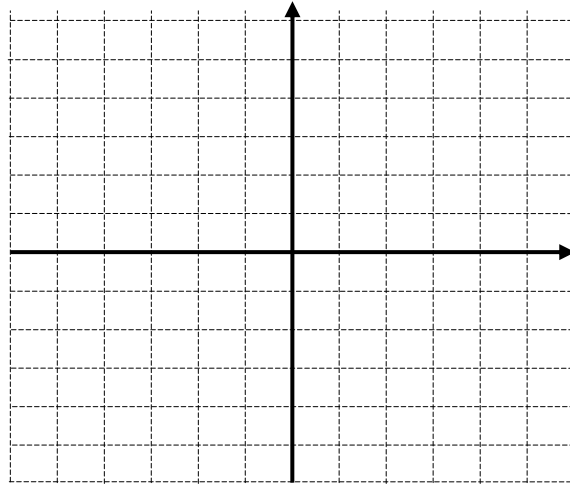
NOTE: NOT every tick on the grid should be taken as '1', and slope fields should NOT be drawn on each point. Use your own judgment for how to do it.

①  $\frac{dy}{dx} = \cos(x)$  ;  $y(0)=1$



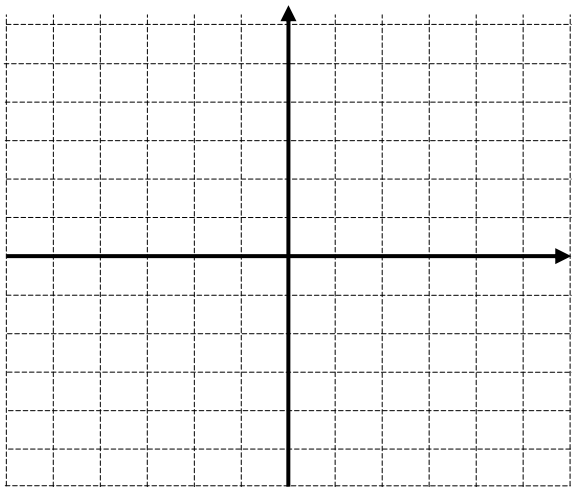
- \* Draw slope field.
- \* Draw solution curves (solve equation first).
- \* Draw a particular solution using the initial conditions.

②  $\frac{dy}{dx} = 3x^2 - 4$  ;  $y(0)=-1$



- \* Draw slope field.
- \* Draw solution curves (solve equation first).
- \* Draw a particular solution using the initial conditions.

③  $\frac{dy}{dx} = x + y$  ;  $y(0)=1$



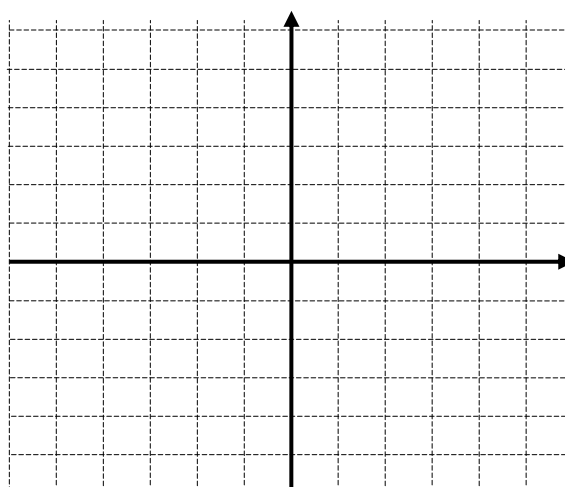
\* Draw slope field.

\* Draw solution curves.

→ Check the possible solution:  $y = ke^x - 1 - x$  .  
What's special about this solution?!?

\* Draw a particular solution using the initial conditions.

④  $\frac{dy}{dx} = \frac{2x}{y}$  ;  $y(1) = 1$



\* Draw slope field.

\* Draw solution curves (solve equation first).

\* Draw a particular solution using the initial conditions.