

## SLOPE FIELDS REVISITED (§6.1)

Also called a *direction field*.

A **plot of short line segments** with the slope given by the equation  $\frac{dy}{dx} = f(x, y)$ .

♪: The notation  $f(x, y)$  means the slope is a function of  $x$  and  $y$ .

You will be asked to draw a slope field ... if you are only asked to use certain points, be sure to include all those points. (Any extra points will be ignored IF they are correct!)

If  $\frac{dy}{dx} = \frac{0}{\text{non-zero \#}}$  then the slope is 0 ... draw a horizontal line segment

If  $\frac{dy}{dx} = \frac{\text{non-zero \#}}{0}$  then the slope is undefined ... draw a vertical line segment

If  $\frac{dy}{dx} = \frac{0}{0}$  then this is indeterminate ... DO NOT draw any line segments!

Below is the slope field for  $\frac{dy}{dx} = -\frac{x}{y}$ .

Notice where there is a horizontal line (when only the numerator is 0) ... a vertical line (when only the denominator is 0) ... and no line drawn at all (when you have 0/0)

