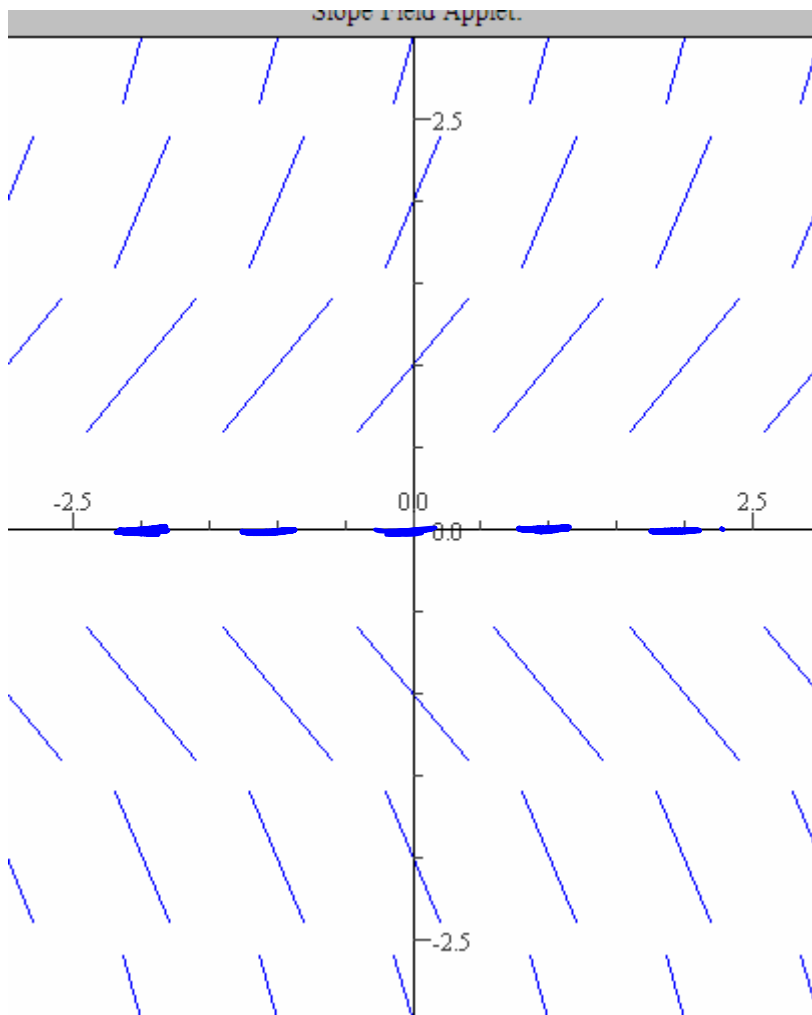


$$\frac{dy}{dx} = y \quad [\text{y-values will matter, x-values will not}]$$

y-VALUES

X  
Y  
Z  
A  
V  
K  
X

(x,y)	-3	-2	-1	0	1	2	3
3	-3	-2	-1	0	1	2	3
2	-3	-2	-1	0	1	2	3
1	-3	-2	-1	0	1	2	3
0	-3	-2	-1	0	1	2	3
-1	-3	-2	-1	0	1	2	3
-2	-3	-2	-1	0	1	2	3
-3	-3	-2	-1	0	1	2	3



$\frac{dy}{dx} = y$   
 SLOPE FIELD SHOULD BE SIMILAR TO THIS

Notice that each row's segments have the same slope because each row has the same y-value

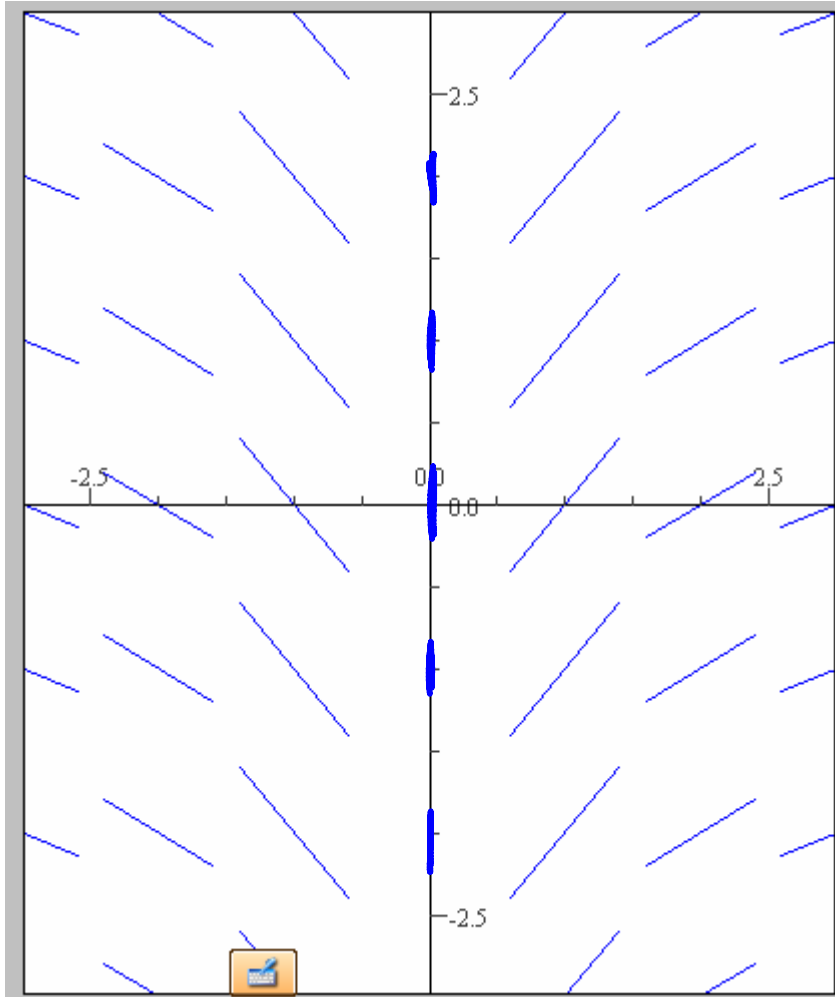
$$\frac{dy}{dx} = \frac{1}{x} \quad [\text{x-values will matter, y-values will not}]$$

y-values

x  
y  
und

(x,y)	-3	-2	-1	0	1	2	3
3	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$
2	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
1	1	1	1	1	1	1	1
0	UND	UND	UND	UND	UND	UND	UND
-1	$-\frac{1}{1}$	-1	-1	-1	-1	-1	-1
-2	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{1}{2}$
-3	$-\frac{1}{3}$	$-\frac{1}{3}$	$-\frac{1}{3}$	$-\frac{1}{3}$	$-\frac{1}{3}$	$-\frac{1}{3}$	$-\frac{1}{3}$

Remember: If  $dy/dx$  is undefined, then draw a vertical slope segment



$$\frac{dy}{dx} = \frac{1}{x}$$

Notice that in each column [not row], that the segments have the same slope.

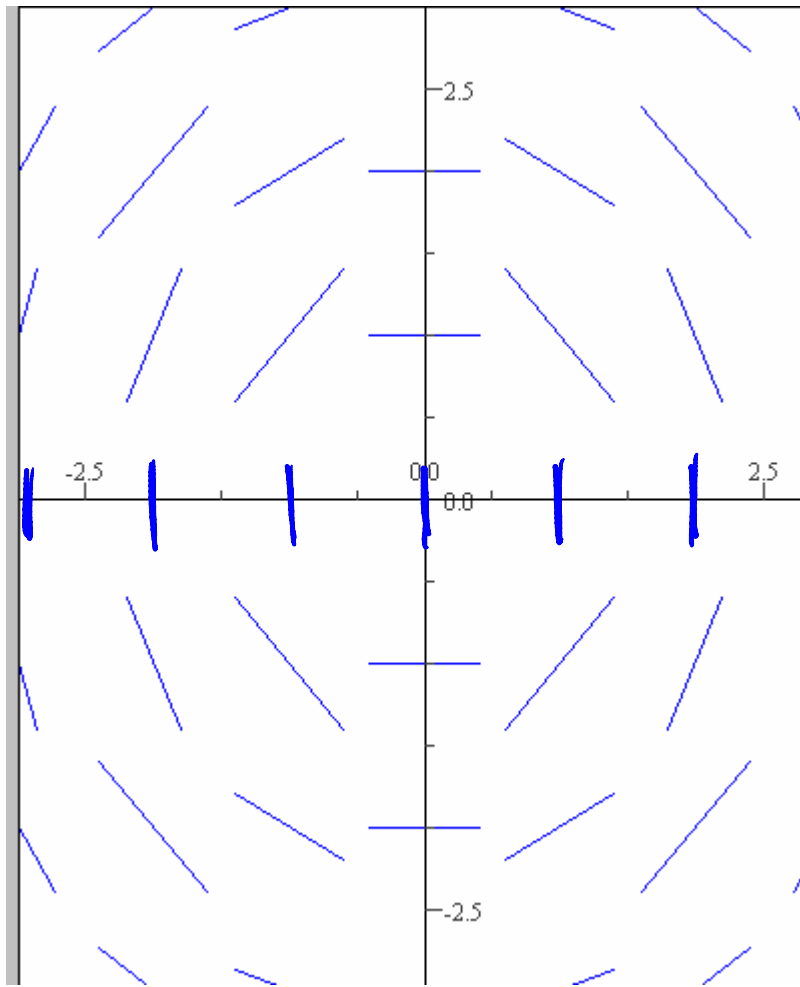
$$\frac{dy}{dx} = \frac{-x}{y}$$

Be careful with your horizontal and vertical tangents!

y-VALUES

S P C L A V X

(x,y)	-3	-2	-1	0	1	2	3
3	$\frac{-3}{-3}$	$\frac{-3}{-2}$	$\frac{-3}{-1}$	und	$\frac{-3}{1}$	$\frac{-3}{2}$	$\frac{-3}{3}$
2	$\frac{-2}{-3}$	$\frac{-2}{-2}$	$\frac{-2}{-1}$	und	$\frac{-2}{1}$	$\frac{-2}{2}$	$\frac{-2}{3}$
1	$\frac{-1}{-3}$	$\frac{-1}{-2}$	$\frac{-1}{-1}$	und	$\frac{-1}{1}$	$\frac{-1}{2}$	$\frac{-1}{3}$
0	0	0	0	und	0	0	0
-1	$\frac{-(-1)}{-3}$	$\frac{-(-1)}{-2}$	$\frac{-(-1)}{-1}$	und	$\frac{-(-1)}{1}$	$\frac{-(-1)}{2}$	$\frac{-(-1)}{3}$
-2	$\frac{-(-2)}{-3}$	$\frac{-(-2)}{-2}$	$\frac{-(-2)}{-1}$	und	$\frac{-(-2)}{1}$	$\frac{-(-2)}{2}$	$\frac{-(-2)}{3}$
-3	$\frac{-(-3)}{-3}$	$\frac{-(-3)}{-2}$	$\frac{-(-3)}{-1}$	und	$\frac{-(-3)}{1}$	$\frac{-(-3)}{2}$	$\frac{-(-3)}{3}$



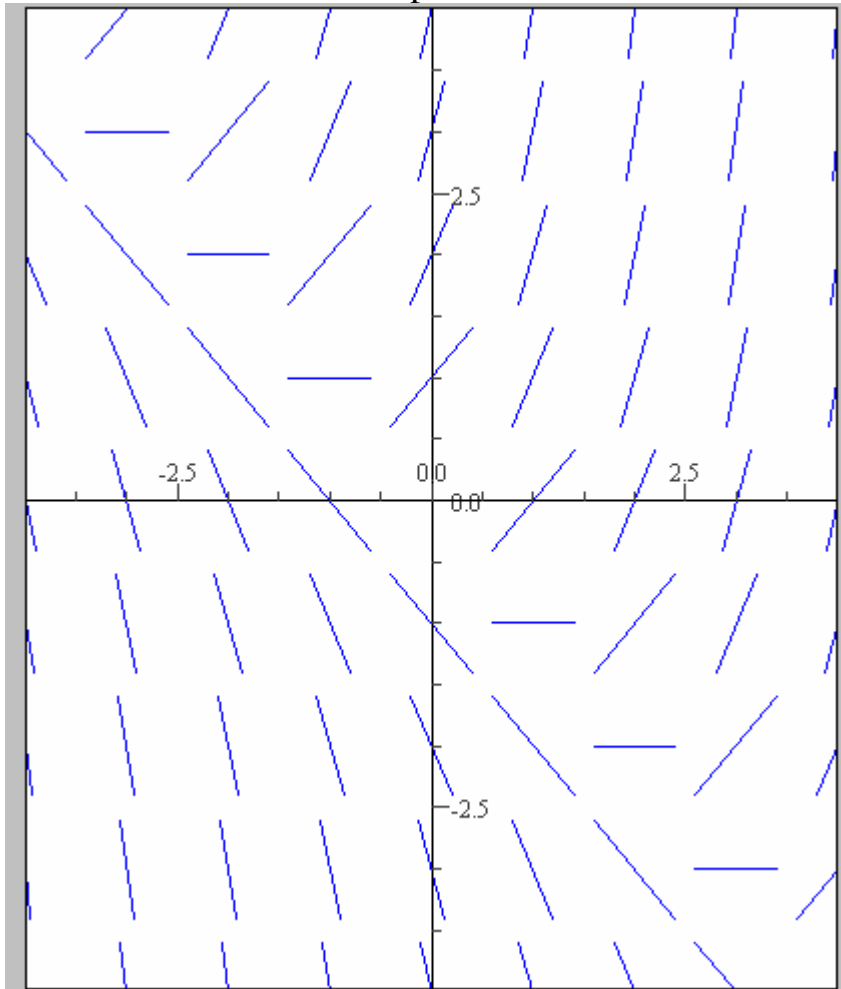
$$\frac{dy}{dx} = \frac{x}{y}$$

\*\*\*\*\*

$$\frac{dy}{dx} = x + y \quad \text{[Think about where the horizontal tangents will occur.]}$$

(x,y)	-3	-2	-1	0	1	2	3
3	3+ - 3	3+ - 2	3+ - 1	3+0	3+1	3+2	3+3
2	2+ - 3	2+ - 2	2+ - 1	2+0	2+1	2+2	2+3
1	1+ - 3	1+ - 2	1+ - 1	1+0	1+1	1+2	1+3
0	0+ - 3	0+ - 2	0+ - 1	0+0	0+1	0+2	0+3
-1	-1+ - 3	-1+ - 2	-1+ - 1	-1+0	-1+1	-1+2	-1+3
-2	-2+ - 3	-2+ - 2	-2+ - 1	-2+0	-2+1	-2+2	-2+3
-3	-3+ - 3	-3+ - 3	-3+ - 1	-3+-	-3+1	-3+2	-3+3

Due to some of the large values of  $dy/dx$ , some of the segments will be hard to draw because of their “steepness”. Just tell students do to their best.



$$\frac{dy}{dx} = x + y$$