AP CALCULUS AB – SLOPE FIELDS

1) Calculate the slope field for

$$\frac{dy}{dx} = -\frac{4x}{9y}$$

on $x \in [0\,,3]$ with $\Delta x = 0.5$ and $y \in [0\,,3]$ with $\Delta y = 0.5$, *i.e.*, fill in the table with the slope values rounded to three digits after the decimal. Typing in and running this little program will make your life easier:

```
PROGRAM:SLOPE
:Prompt X
:Prompt Y
: -4*X/9/Y→S
:Disp S
:
```

```
prgmSLOPE
X=?0.5
Y=?3
      -.0740740741
                Done
```

	0.0	0.5	1.0	1.5	2.0	2.5	3.0	x
3.0	0.0	−0.074	−0.148	−0.222	−0.296	−0.370	−0.444	
2.5	0.0	−0.089	−0.178	−0.267	−0.356	−0.444	−0.533	
2.0	0.0	−0.111	−0.222	−0.333	−0.444	−0.556	−0.667	
1.5	0.0	−0.148	−0.296	−0.444	−0.593	−0.741	−0.889	
1.0	0.0	−0.222	−0.444	−0.667	−0.889	−1.111	−1.333	
0.5	0.0	−0.444	−0.889	−1.333	−1.778	−2.222	−2.667	
0.0	undef.	−∞	−∞	−∞	−∞	−∞	−∞	
y								

2) Graph the slopes from the table on the grid.