

Group  Names

Student Velpam Q. Effid used Euler's method with step size 0.5 to compute the following table of values for the initial value problem  $y' = f(x, y)$ ,  $y(0) = 1$ .

$n$	$x_n$	$y_n$
0	0	1
1	0.5	1
2	1	1.5
3	1.5	3
4	2	7.5

- A. Find a formula for  $f(x, y)$  that is compatible with this data.
- B. For the  $f(x, y)$  you determined, how good an approximation is Euler's method with step size 0.5?