

Crowdsourcing to Create Slope Fields – Class Handout

You will be contributing to the class-wide generation of slope fields for each of the following three differential equations. Indicate on the line below the differential equation the color that has been chosen for that slope field.

(A) $\frac{dy}{dx} = \frac{y}{x}$

(B) $\frac{dy}{dx} = \frac{x}{y}$

(C) $\frac{dy}{dx} = y^2$

Color: _____

Color: _____

Color: _____

- Fill in the table by writing your assigned points in the leftmost column, and then finding the slope at that point for each of the given differential equations.

Assigned Point	(A) Slope of differential equation	(B) Slope of differential equation	(C) Slope of differential equation
Color of slope field:			

- You will now use your slopes from the table to contribute to the class slope fields. On each slope field, place an appropriately colored strip of paper at each of your assigned points, tilting the strip as necessary to approximate the slope you found above. Use two pieces of tape on the back to secure each strip in place.

Remember that a positive slope points up and to the right, while a negative slope points down and to the right. Also, a slope with an absolute value of 1 has an angle of 45°, a slope with an absolute value of less than 1 is more shallow, and a slope with an absolute value greater than 1 is more steep.

When you have finished with your own slope strips, see what you can do to help assist your classmates with theirs.