Slope-intercept Form

Slope-intercept Form is a special way of writing a linear equation that makes it easy to graph. We recognize slope-intercept forms of linear equations by the position of the terms. The format is $y = mx + b$ where m is the slope and b is the y-intercept of the line. The y value is all we need for the y-intercept, since we know that the x component of the y-intercept is always 0.

Remember….
Slope-intercept form of a linear equation: $y = mx + b$
1. Solved for y
2. The x variable term is immediately following the equal sign
3. The b (y-intercept) term is positioned last

Look closely at these examples of linear equations. Some are slope-intercept form, and some are not. Be sure you understand the explanation for each.

Linear Equation Examples	Is it in Slope-intercept Form?	Explanation
$y = 2x + 3$	Yes m = 2 b = (0 , 3)	The equation is solved for y, the x-term follows the equal sign and the y-intercept is positioned last
$3y = 4$	No	The equation is not solved for y since y has a coefficient of 3.
$y = \frac{2}{3}x - 1$	Yes $m = \frac{2}{3}$ b = (0 , -1)	Remember, the slope can be a fraction and the y-intercept can be negative.
$2x = 4 - 3y$	No	The equation is not solved for y.

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Label the following linear equations with the correct category: Slope-intercept Form or Not Slope-intercept Form. For the equations that are not in slope-intercept form, write an explanation telling why.

Linear Equation Examples	Slope-intercept Form or Not Slope-intercept Form?	If "Not Slope-intercept Form" explain why.
$y = -7x - \dfrac{3}{4}$		
$y = 4$		
$x = \dfrac{2}{3}y - 1$		
$2x + 3y = 0$		
$2y = \dfrac{2}{3}x + 1$		
$y = x$		