* Creation of Linear Functions from Slope and Y Intercept * Euclidean Geometry states that Two Points determine a Line therefore given two points in a Rectangular Coordinate System a Linear Function can be created with one specific equation.

The Standard Form for a Linear Function is: $\quad A x+B y=C$
The Slope Intercept Form for a Linear Function is: $\quad \mathrm{y}=\mathrm{mx}+\mathrm{b}$
The Slope, which is defined as the Rise / Run, can be determined by the difference of the Y values over the difference of the X values. Given two points (ordered pairs) in a Rectangular Coordinate System. Therefore Slope is defined as follows: $\mathbf{m}=\left(\mathbf{Y}_{\mathbf{2}}-\mathbf{Y}_{\mathbf{1}}\right) /\left(\mathbf{X}_{\mathbf{2}}-\mathbf{X}_{\mathbf{1}}\right)$

Given: Slope $=-2 / 3 \& P_{1}=(0,-2)$ Determine equation of a Linear Function
Substitute the Slope and the Y intercept into the Slope Intercept Form.
After all calculations are finished change into Standard Form.

$$
y=(-2 / 3) x+-2 \quad+3 y=-2 x-2 \quad+2 x+3 y=-2
$$

Therefore the Linear Function for the given two points: $\quad+2 x+3 y=-2$ Verify by calculating and checking the $\mathbf{X}$ and $\mathbf{Y}$ intercepts then compare to Given!
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Given: Slope $=+2 / 5$ and $P_{1}=(0,+3)$ Determine equation of a Linear Function
Substitute the Slope and the $Y$ intercept into the Slope Intercept Form.
After all calculations are finished change into Standard Form.

$$
y=(+2 / 5) x+3 \quad+5 y=+2 x+3 \quad-2 x+5 y=+3
$$

Therefore the Linear Function for the given two points: $\quad-2 x+5 y=+3$
Verify by calculating and checking the $X$ and $Y$ intercepts then compare to Given!
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