Point-Slope Form of a Linear Equation

Rania and Portia are working on the design plans for the city of Geocove's waterpark.

They have completed their designs for most of the pools. Now, they must design the systems that will drain the pools at the end of each season.

Rania is working on the drainage systems for three different pools.

The lines on the graph represent the maximum rate at which each of the pools can be drained.

Before she can continue working on the drainage system design, Rania needs to write an equation to represent each of these lines.

Rania writes the equation y minus eighteen hundred is equal to negative three hundred times the quantity x minus zero.

How does this equation differ from the equations you are used to working with to represent lines?

This equation is not written in slope-intercept form.

Instead, it is expressed using point-slope form.

In point-slope form, you can read the slope of the line and the coordinates of one ordered pair along the line from the equation.

Any equation written in point-slope form can be converted into slope-intercept form.

In this lesson you will learn how to rewrite equations from point-slope form into slope-intercept form.