

Guided Notes: 6.2: Point-Slope Form

A. Point-Slope Form Equation

The line with slope m that contains the point (x_1, y_1) can be described by the equation:
(Write the Point-Slope Equation)

B. Write an equation in point-slope form of each line.

1. Slope is 3.5, and $(-3, 2)$ is on the line.

2. Slope is 0, and $(-2, -1)$ is on the line.

C. Reflect

Suppose that we are given that the slope of a line is 0. What is the only additional information we would need to write an equation of the line? Explain.

D. Solve the problem using an equation in point-slope form.

1. Paul wants to place an ad in a newspaper. The newspaper charges \$10 for the first 2 lines of text and \$3 for each additional line of text. Paul's ad is 8 lines long. How much will the ad cost?

2. Paul would like to shop for the best price to place the ad. A different newspaper has a base cost of \$15 for 3 lines and \$2 for every extra line. How much will an 8-line ad cost in this newspaper?

E. Write an equation in point-slope form for each line.

1. $(2, 1)$ and $(3, 4)$ are on the line.

2. $(1, 3)$ and $(2, 3)$ are on the line.

F. Solve the problem using an equation in point-slope form.

1. An animal shelter asks all volunteers to take a training session and then to volunteer for one shift each week. Each shift is the same number of hours. The table shows that number of hours Joan and her friend Miguel worked over several weeks. Another friend, Lili, plans to volunteer for 24 weeks over the next year. How many hours will Lili volunteer?

G. Elaborate

1. Can we write an equation in point-slope form that passes through any two given points in a coordinate plane?
2. Compare and contrast the slope-intercept form of a linear equation and the point-slope form.
3. Given a linear graph, how can we write an equation in point-slope form of the line?