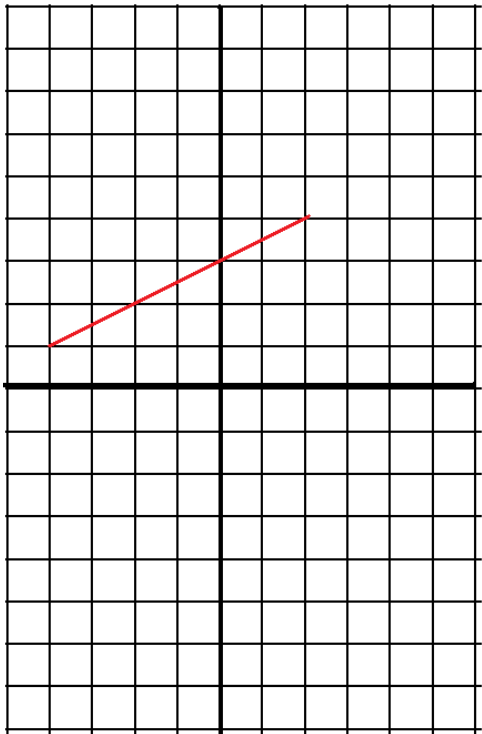


Name _____

Quiz on Equations of Straight Lines

1. Find the equation of the line that passes through (2,4) and (-4,1) in slope-intercept form.



Using the slope formula or graph the student can find the slope

$$m = \frac{4 - 1}{2 - -4} = \frac{3}{6} = \frac{1}{2}$$

Using the graph the students can read the y-intercept as (0,3)

$$y = \frac{1}{2}x + 3$$

or

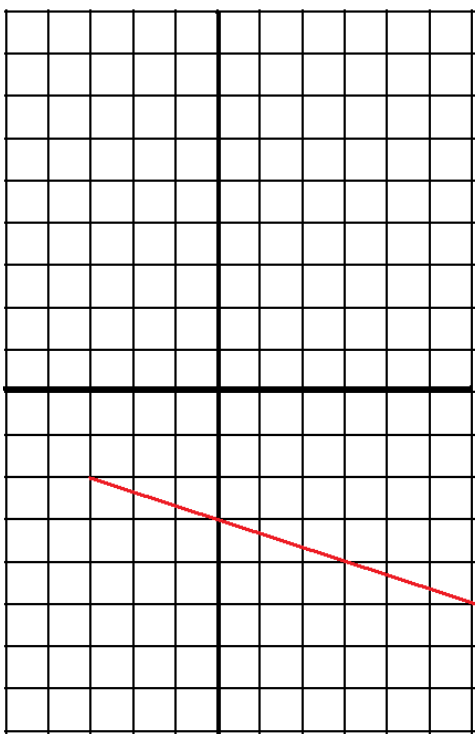
The student can use point slope form and then convert it to slope-intercept form.

$$y - 1 = \frac{1}{2}(x - -4)$$

$$y = \frac{1}{2}x + 2 + 1$$

$$y = \frac{1}{2}x + 3$$

2. Find the equation of the line that has a slope of $-\frac{1}{3}$ or $-\frac{1}{3}$ and passes through (-3,-2) in standard form.



or

The student could graph the point and then use the slope to find the y-intercept or (0,-3). Then the student could write the equation and then change it to standard form.

$$y = -\frac{1}{3}x - 3$$

$$3y = -x - 9$$

$$x + 3y = -9$$

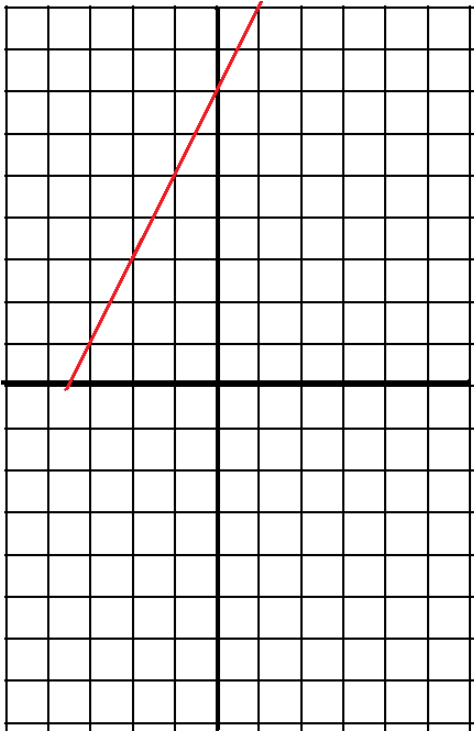
The student could use the slope and the point-slope form to write an equation and then change it to standard form.

$$y + 2 = \frac{1}{3}(x + 3)$$

$$3y + 6 = x + 3$$

$$x + 3y = -9$$

3. Graph the line whose equation is $y - 3 = 2(x - -2)$ and write the equation of the line in slope-intercept form.



The student could read that the slope is 2 and the point that it passes through is $(-2, 3)$. Using the graph they could find the y-intercept to be $(0, 7)$. Then write the equation.

$$y = 2x + 7$$

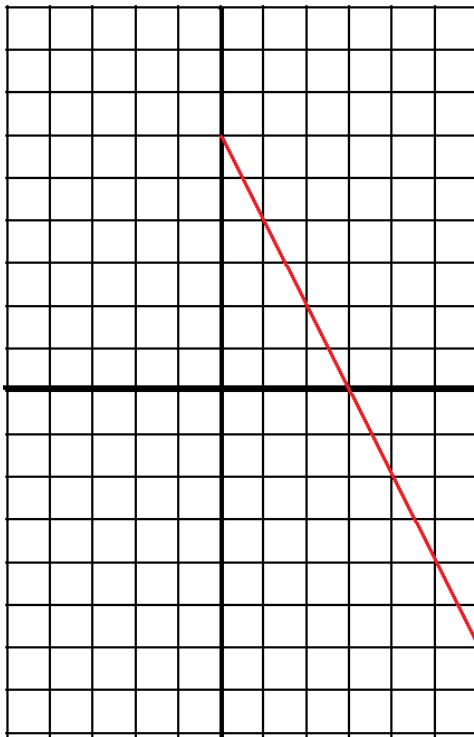
or The student could expand the given equation and convert the equation to slope-intercept form.

$$y - 3 = 2(x - -2)$$

$$y - 3 = 2x + 4$$

$$y = 2x + 7$$

4. Graph the line whose equation is $2x + y = 6$.



The student could use the standard form to find the two intercepts. To find the y-intercept let $x=0$ and find that $y=6$, so $(0, 6)$ is the y-intercept. To find the x-intercept let $y=0$ and find that $x=3$, so $(3, 0)$ is the x-intercept. Using these two points you can create the graph.

or a student could take the equation and convert it to slope-intercept form. Then they could graph the line using the y-intercept and the slope.

$$2x + y = 6$$

$$y = -2x + 6$$