Name: _____ Date: _____

Teacher: _____ Section: _____

For each set, first examine the problem on the left and answer the question(s) about it. Then complete the similar problem on the right.   **graphing linear equations**
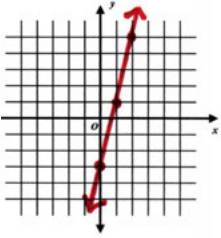

SET 1: Write an equation in **slope-intercept form** using the information provided. Then **graph** the line. SHOW ALL OF YOUR WORK.

Andrew solved this problem **correctly**.
Here is his work:

The line contains the point (2, 5) and has a slope of 4.

$y = mx + b$
$5 = 4(2) + b$
$5 = 8 + b$
$-8 \quad -8$
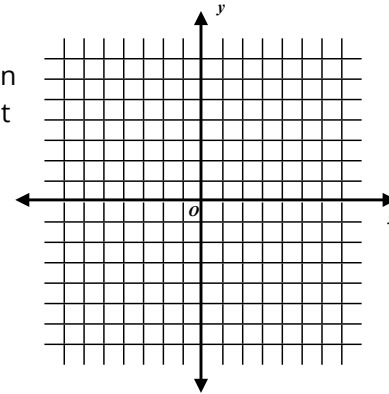$-3 = b$
$y = 4x - 3$

- What about the point (0, –3) indicates that it should be drawn on the *y*-axis instead of the *x*-axis?

- How could he have checked whether he graphed the line correctly?

Your Turn:

The line contains the point (–2, 5) and has a slope of –4.

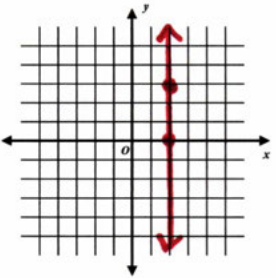a. Write an equation in slope-intercept form.

b. Graph the line.

SET 2: Graph the line. SHOW ALL OF YOUR WORK.

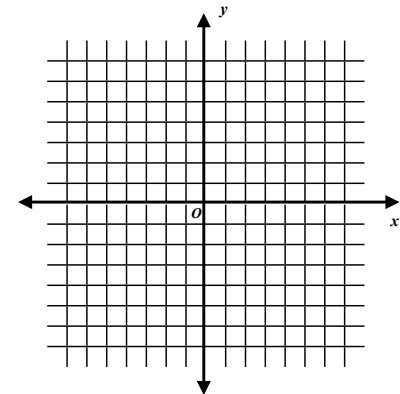Reza graphed this equation **correctly**.
Here is her work:

$x = 2$

X	Y
2	0
2	3

- Would the point (3, 2) ever be on the line *x* = 2? Explain.

- What is the slope of the line?

Your Turn:

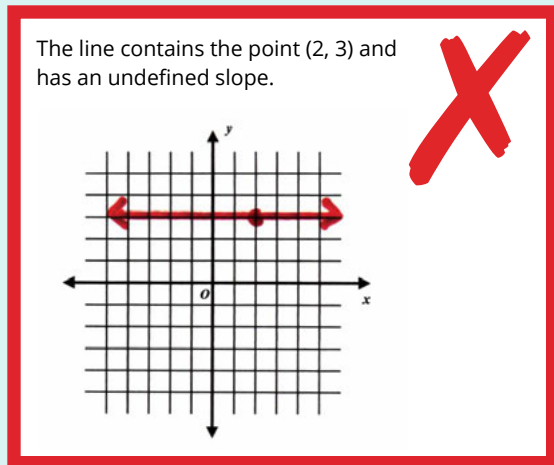$y = -2$

SET 3: Graph the line. SHOW ALL OF YOUR WORK.

Mao **didn't** graph this line correctly.
Here is his work:

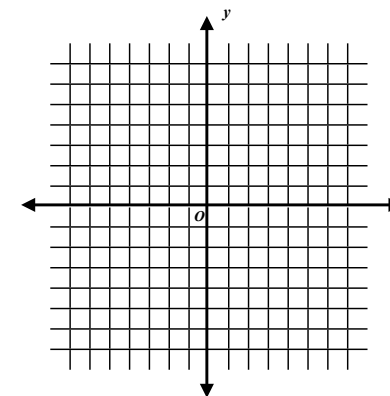The line contains the point (2, 3) and has an undefined slope.
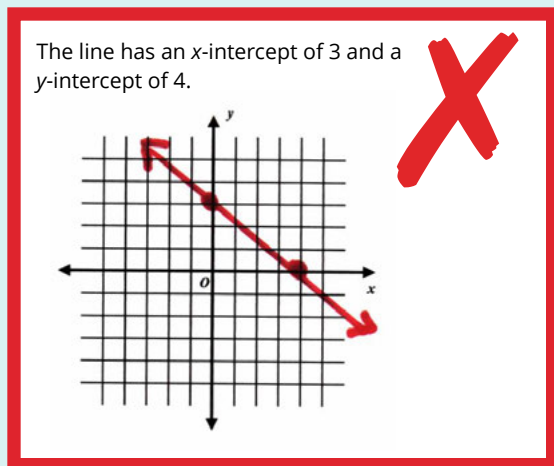

🔴 What slope did Mao use?

Your Turn:

The line contains the point (–3, 1) and has a slope of $\frac{0}{1}$.

SET 4: Write the ordered pair for each intercept. Then **graph** the line. SHOW ALL OF YOUR WORK.

Callie forgot to write the ordered pairs and **didn't** graph this line correctly. Here is her work:

The line has an *x*-intercept of 3 and a *y*-intercept of 4.

🔴 What intercepts did Callie graph?

  x-intercept _____

  y-intercept _____

🔴 Callie might have graphed the points correctly if she had written them out first. Write the correct points of an *x*-intercept of 3 and a *y*-intercept of 4.

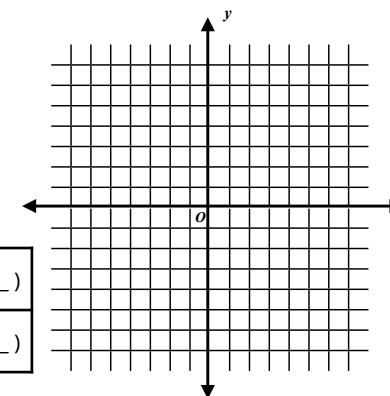|	
x-intercept	(___ , ___)
y-intercept	(___ , ___)

Your Turn:

The line has an *x*-intercept of 4 and a *y*-intercept of -3.

a. Use the information above to write the points of the *x*-intercept and *y*-intercept.

x-intercept	(___ , ___)
y-intercept	(___ , ___)

b. Graph the line.