

Solving Systems of Equations by Graphing WS (with context)

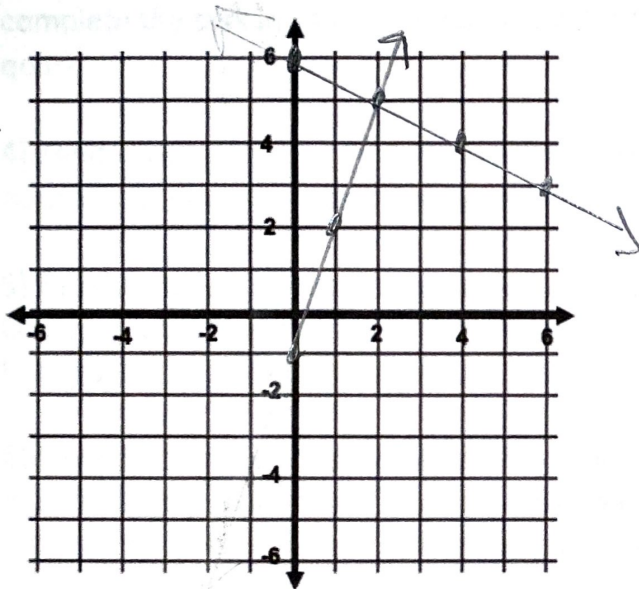
For each problem, graph the system of equations. Determine the solution (written as an ordered pair), then give the meaning of the solution in the context of the problem.

- 1) Today, the temperature in New York City is -1°F and is expected to rise 3°F per day. It's 6°F in Juneau, Alaska and expected to fall 1°F every 2 days.

This can be represented by the following system of equations:

$$y = 3x - 1$$

$$y = -\frac{1}{2}x + 6$$



Solution (written as an ordered pair):

$$(2, 5)$$

What does the solution mean in the context of the problem?

In 2 days, it will be 5°F in each city.

- 2) Suppose you are testing two fertilizers on bamboo plants A and B, which are growing under identical conditions. Plant A is six inches tall and growing at a rate of 4 inches each day. Plant B is 10 inches tall and growing at a rate of 2 inches each day.

This can be represented by the following system of equations:

$$y = 4x + 6$$

$$y = 2x + 10$$

Solution (written as an ordered pair):

$$(2, 14)$$

What does the solution mean in the context of the problem?

In 2 days, each bamboo plant will be 14 inches tall.

