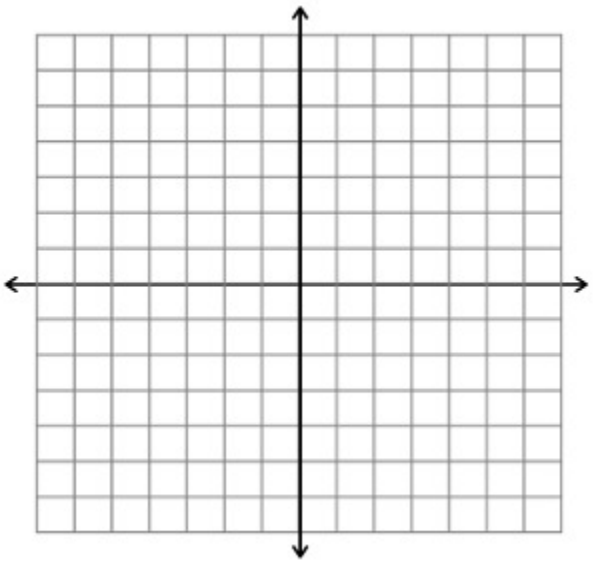
Sec. 7.2 – Solving a System of Linear Equations Graphically

1. Solve this linear system.

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



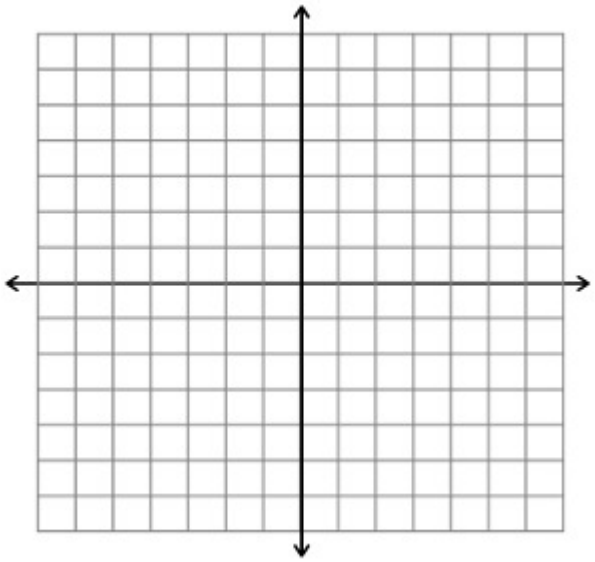
2. Jaden left her cabin on Waskesiu Lake, in Saskatchewan, and paddled her kayak toward her friend Tyrell's cabin at an average speed of 4 km/h. Tyrell started at his cabin at the same time and paddled at an average speed of 2.4 km/h toward Jaden's cabin. The cabins are 6 km apart. A linear system that models this situation is:

$d = 6 - 4t$

$d = 2.4t$

where d is the distance in kilometres from Tyrell's cabin and t is the time in hours since both people began their journey

a) Graph the linear system above.



b) Use the graph to solve this problem:

When do Jaden and Tyrell meet and how far are they from Tyrell's cabin?

3. a) Write a linear system to model this situation:
Wayne received and sent 60 text messages on his cell phone in one weekend. He sent 10 more messages than he received.

Given:	Creating a Linear System
There are sent text messages and received text messages.	Let s represent the number of sent text messages. Let r represent the number of received text messages.
The total number of text messages sent and received is 60.	One equation is: $s + r = 60$
Wayne sent 10 more messages than he received.	Another equation is: $s - r = 10$

b) Graph the linear system, then solve this problem:
How many text messages did Wayne send and how many did he receive?

Equation	s-intercept	r-intercept
$s + r = 60$	60	60
$s - r = 10$	10	–10