

Jack and Diane are filling up bath tubs to give their babies a bath. They start at the same time. Jack's tub was empty at the start and his faucet is filling the tub at a rate of 3 gallons every 2 minutes. Diane's tub already has 4 gallons of water at the start and her faucet is filling the tub at a rate of 1 gallon per 2 minutes.

Part A Write a system of linear equations to represent the situation above

Jack's equation _____

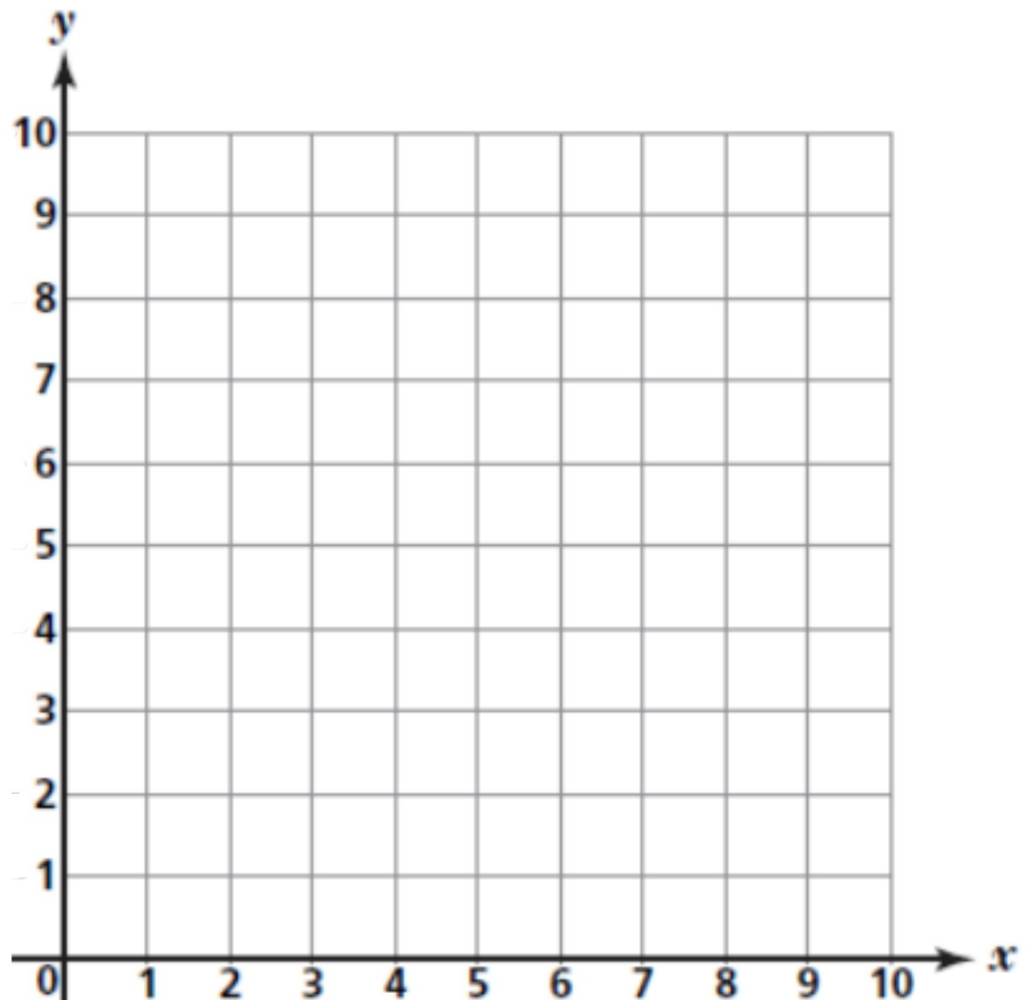
Diane's equation _____

Part B What is Jack's initial value? _____

What is Diane's initial value? _____

Part C Graph the equations on the grid below. At how many minutes will Jack and Diane's tubs have the same amount of water? _____

At that time, how much water is in each tub? _____



Bill and Ted are filling up bath tubs to give their dogs a bath. They start at the same time. Bill's tub was empty at the start and his faucet is filling the tub at a rate of 1 gallon every 3 minutes. Ted's tub already has 5 gallons of water at the start and his faucet is filling the tub at a rate of 1 gallon per 3 minutes as well.

Part A Write a system of linear equations to represent the situation above

Bill's equation _____

Ted's equation _____

Part B What is Bill's initial value? _____

What is Ted's initial value? _____

Part C Graph the equations on the grid below. Explain what your graph means. Be specific.

