

Name _____

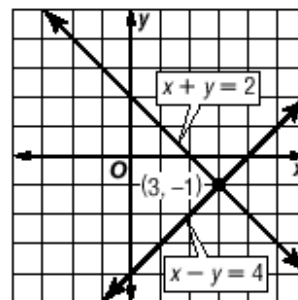
Date _____ Pd. _____

Notes: Graphing Systems of Equations Day 3

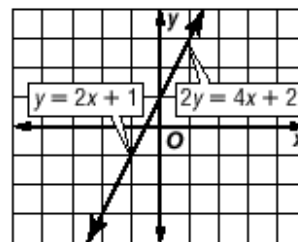
Example

Graph each system of equations. Then determine whether the system has *no* solution, *one* solution, or *infinitely many* solutions. If the system has one solution, name it.

a. $x + y = 2$
 $x - y = 4$



b. $y = 2x + 1$
 $2y = 4x + 2$



How to read an application problem in order to solve it:

- Reading the problem _____
 - _____ the entire problem.
 - Read the problem a _____ time to _____.
 - Read the problem a _____ time to identify the _____ in the problem and what they represent.
- Describing the _____ among the quantities in the problem
- _____ the variables and what they represent
- Writing a _____ of equations to represent the _____ among the quantities in the problem
- _____ the system and _____ the solution in the context of the problem
- _____ the question

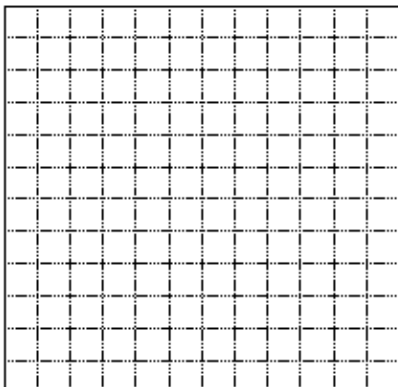
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Exit Card: Graphing Systems of Equations Day 3**ECR**

Paddy is saving to buy a game. He has \$30 now and plans to save \$3 each week. The price of the game is now \$75 but is *decreasing* at the rate of \$2 per week.

- Write an equation that represents the amount of money that Paddy will save, if t is the number of weeks and S represents the money saved.
- Write an equation representing the money Paddy will need to buy the game, if t is the number of weeks and S represents the money needed.
- Graph your two equations on a grid.
(Suggested graphing window: $0 \leq x \leq 12, 0 \leq y \leq 120$)
- In how many weeks will Paddy have enough money to buy the game? Use mathematics to justify your answer.

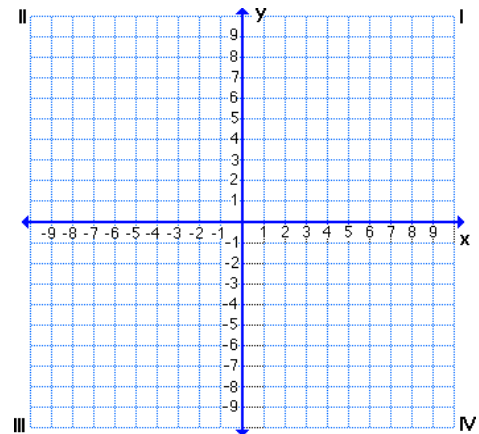


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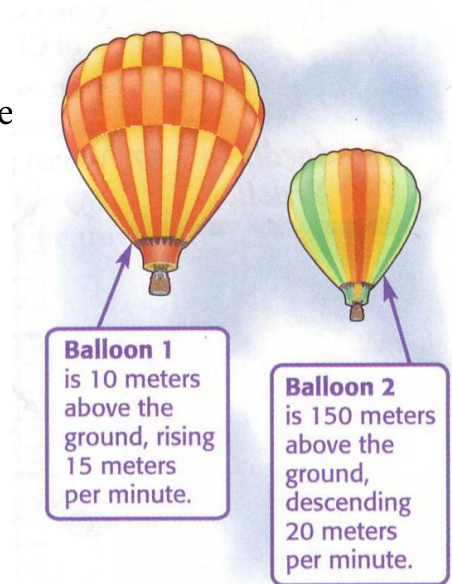
Homework: Page 373 (42, 44 – 50)

42. Use $y = 2x + 6$, $3x + 2y = 19$, and $y = 2$ to contain the sides of a triangle. Find the coordinates of the vertices of the triangle.



Use the graphic at right for questions 44 and 45.

44. In how many minutes will the balloons be at the same height?



45. How high will the balloons be at that time?

Monica and Michael Gordon both want to buy a scooter. Monica has already saved \$25 and plans to save \$5 per week until she can buy the scooter. Michael has \$16 and plans to save \$8 per week.

46. In how many weeks will Monica and Michael have saved the same amount of money?

47. How much will each person have saved at that time?

Use the graph at the right.

48. Which company had the greater profit during the ten years?

49. Which company had a greater rate of growth?

50. If the profit patterns continue, will the profits of the two companies ever be equal? Explain.

