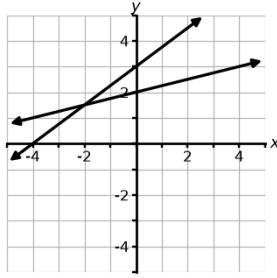


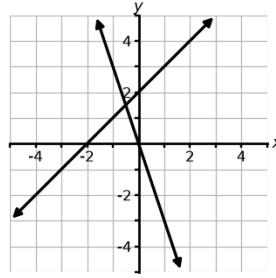
1. The graph shows a system.

**Part A:** Choose its two equations.

- ☐ A) $y = \frac{1}{4}x + 3$ ☐ B) $y = \frac{1}{4}x + 2$
☐ C) $y = \frac{3}{4}x + 3$ ☐ D) $y = -\frac{3}{4}x + 3$

Part B: Estimate the solution.

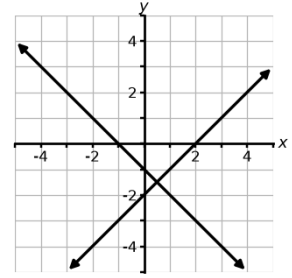
2. The graph shows a system.

**Part A:** Choose its two equations.

- ☐ A) $y = x + 2$ ☐ B) $y = -2x$
☐ C) $y = -3x$ ☐ D) $y = -x + 2$

Part B: Estimate the solution.

3. The graph shows a system.

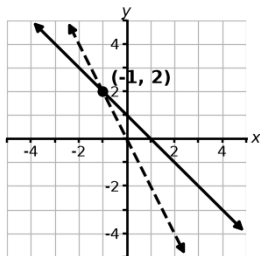
**Part A:** Choose its two equations.

- ☐ A) $y = x - 1$ ☐ B) $y = -x - 1$
☐ C) $y = x - 2$ ☐ D) $y = -2x - 1$

Part B: Estimate the solution.

4. Use the graph. True or false?

- a) A solution to $-x + 1 = -2x$ is -1.
b) A solution to $2 = -x + 1$ is -1.
c) A solution to $-1 = -2x$ is 2.
d) A solution to $-x + 1 = -2x$ is 2.



Solid:

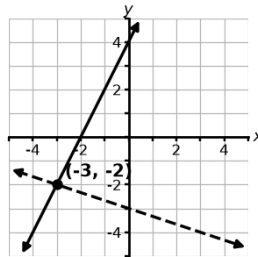
$y = -x + 1$

Dashed:

$y = -2x$

5. Use the graph. True or false?

- a) A solution to $-2 = 2x + 4$ is -3.
b) A solution to $2x + 4 = -\frac{1}{3}x - 3$ is -2.
c) A solution to $-2 = -\frac{1}{3}x - 3$ is -3.
d) A solution to $-3 = -\frac{1}{3}x - 3$ is -2.



Solid:

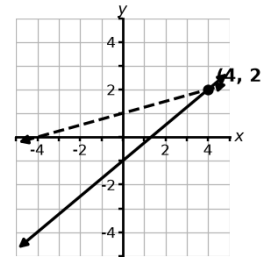
$y = 2x + 4$

Dashed:

$y = -\frac{1}{3}x - 3$

6. Use the graph. True or false?

- a) A solution to $4 = \frac{1}{4}x + 1$ is 2.
b) A solution to $2 = \frac{3}{4}x - 1$ is 4.
c) A solution to $\frac{3}{4}x - 1 = \frac{1}{4}x + 1$ is 4.
d) A solution to $\frac{3}{4}x - 1 = \frac{1}{4}x + 1$ is 2.



Solid:

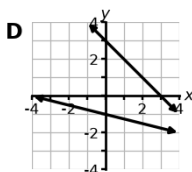
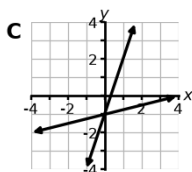
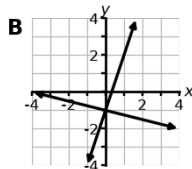
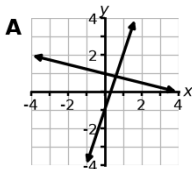
$y = \frac{3}{4}x - 1$

Dashed:

$y = \frac{1}{4}x + 1$

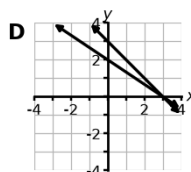
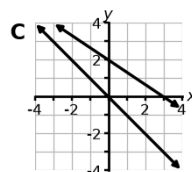
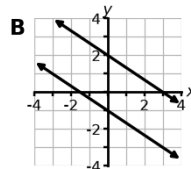
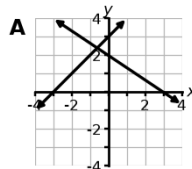
7. Which graph shows this system?

$y = 3x - 1$ and $y = -\frac{1}{4}x - 1$



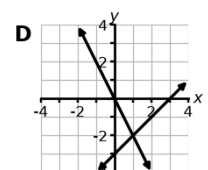
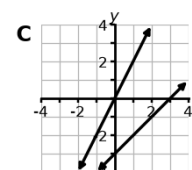
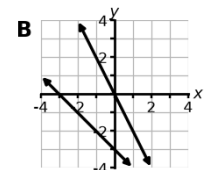
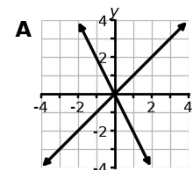
8. Which graph shows this system?

$y = -\frac{2}{3}x + 2$ and $y = -x + 3$



9. Which graph shows this system?

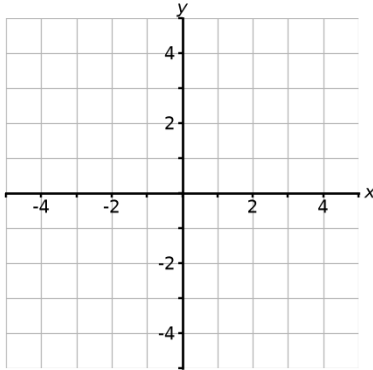
$y = -2x$ and $y = x - 3$



10. Graph the system and find the solution.

$$y = x + 4$$

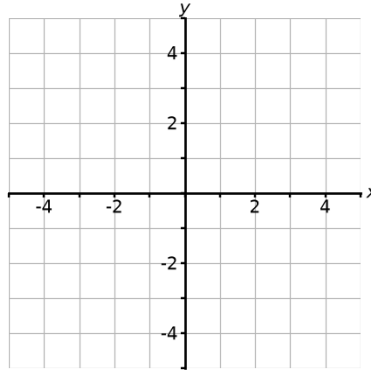
$$y = -\frac{1}{2}x - 2$$



11. Graph the system and find the solution.

$$y = -x - 3$$

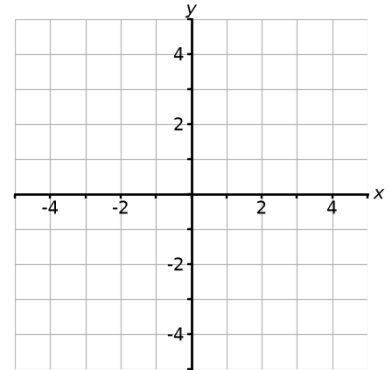
$$y = \frac{1}{2}x$$



12. Graph the system and find the solution.

$$y = -3x - 4$$

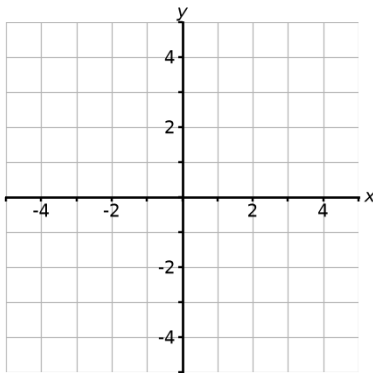
$$y = \frac{1}{3}x - 4$$



13. Graph the system and find the solution.

$$y = \frac{5}{3}x - 4$$

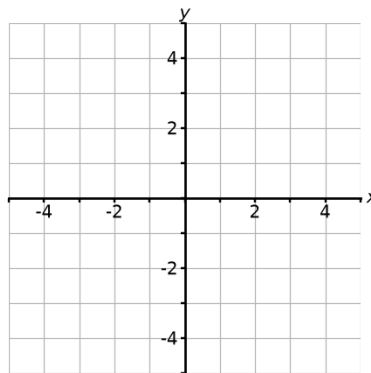
$$y = -4$$



14. Graph the system and find the solution.

$$y = -3$$

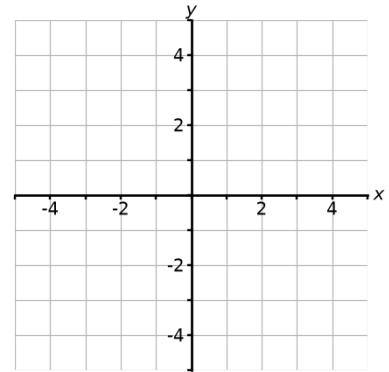
$$y = x - 1$$



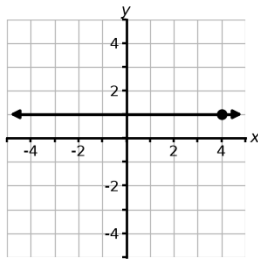
15. Graph the system and find the solution.

$$y = -\frac{1}{3}x + 3$$

$$y = \frac{2}{3}x + 3$$

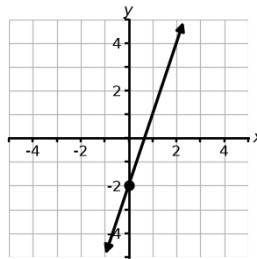


16. The solution to the system is (4, 1). One equation is graphed. Select all the equations that could be the other equation in the system.



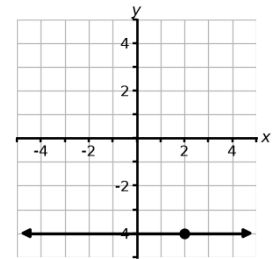
- ☐ A) $y = 2x - 6$
☐ B) $y = -x + 5$
☐ C) $y = 2x - 7$
☐ D) $y = -\frac{7}{4}x + 8$

17. The solution to the system is (0, -2). One equation is graphed. Select all the equations that could be the other equation in the system.



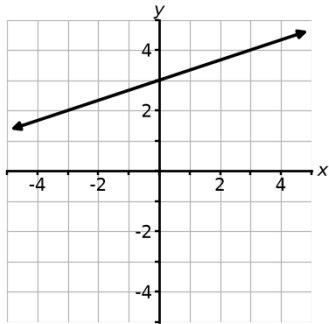
- ☐ A) $y = 3x - 1$
☐ B) $y = \frac{1}{3}x - 2$
☐ C) $y = -\frac{1}{3}x - 2$
☐ D) $y = -\frac{1}{4}x - 2$

18. The solution to the system is (2, -4). One equation is graphed. Select all the equations that could be the other equation in the system.

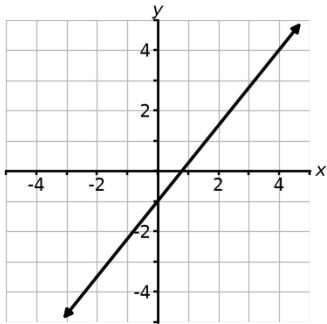


- ☐ A) $y = -x - 1$
☐ B) $y = -x - 2$
☐ C) $y = x - 2$
☐ D) $y = -3x + 2$

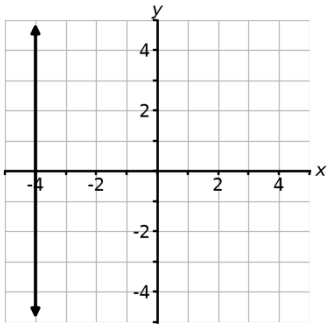
19. Here is the graph of one equation in a system. Write a second equation so the system has no solution.



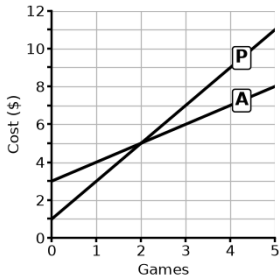
20. Here is the graph of one equation in a system. Write a second equation so the system has infinitely many solutions.



21. Here is the graph of one equation in a system. Write a second equation so the system has exactly one solution.



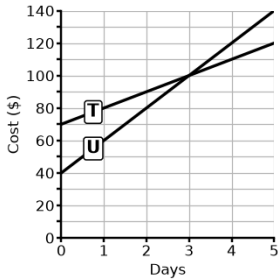
22. Alley Cat (A) and Pin Palace (P) charge for shoes plus each game.



Part A: Write both equations.

Part B: What does the crossing mean?

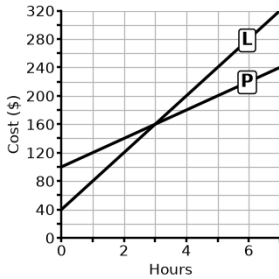
23. U-Move (U) and Truck Town (T) rent trucks for a fee plus each day.



Part A: Write both equations.

Part B: What does the crossing mean?

24. Dr. Patel (P) and Ms. Lee (L) tutor for a fee plus an hourly rate.

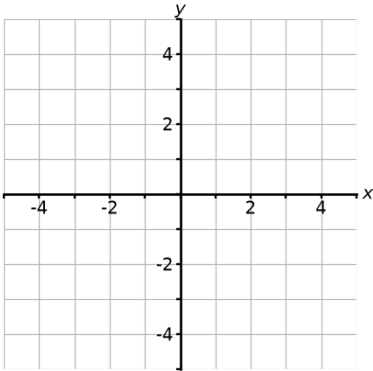


Part A: Write both equations.

Part B: What does the crossing mean?

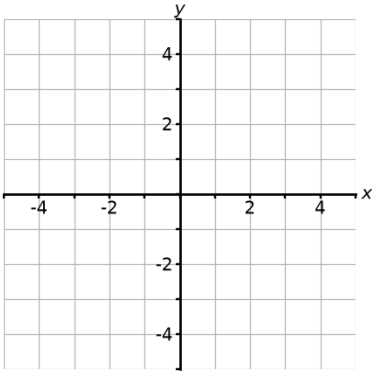
25. Graph the system and find the solution.

$$7x - 4y = 0$$
$$y = -\frac{3}{2}x$$



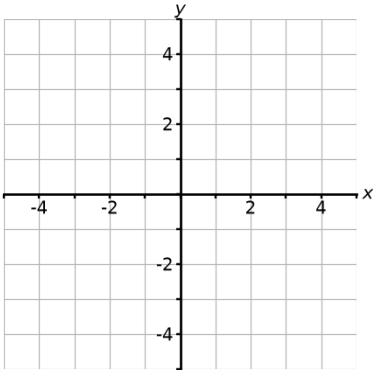
26. Graph the system and find the solution.

$$y = -\frac{7}{4}x - 4$$
$$y = -4$$



27. Graph the system and find the solution.

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



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Answer Key

1. B, C; about (-2.0, 1.5)	2. A, C; about (-0.5, 1.5)	3. B, C; about (0.5, -1.5)
4. a) T, b) T, c) F, d) F	5. a) T, b) F, c) T, d) F	6. a) F, b) T, c) T, d) F
7. Graph B	8. Graph D	9. Graph D
10. (-4, 0)	11. (-2, -1)	12. (0, -4)
13. (0, -4)	14. (-2, -3)	15. (0, 3)
16. B, C, D	17. B, C, D	18. B, D
19. Any line with the same slope and a different y-intercept, e.g. $y = \frac{1}{3}x$	20. The same line: $y = \frac{5}{4}x - 1$ (or any equivalent, e.g. $5x - 4y = 4$)	21. Any line that is not vertical, e.g. $y = 2x - 1$
22. A: $y = x + 3$; P: $y = 2x + 1$. Crossing (2, 5): bowling 2 games costs \$5 at either place.	23. U: $y = 20x + 40$; T: $y = 10x + 70$. Crossing (3, 100): renting for 3 days costs \$100 at either company.	24. P: $y = 20x + 100$; L: $y = 40x + 40$. Crossing (3, 160): 3 hours of tutoring costs \$160 with either tutor.
25. (0, 0)	26. (0, -4)	27. (0, -1)