



THIRD SPACE  
LEARNING

# Solving systems of equations by graphing Worksheet

Algebra

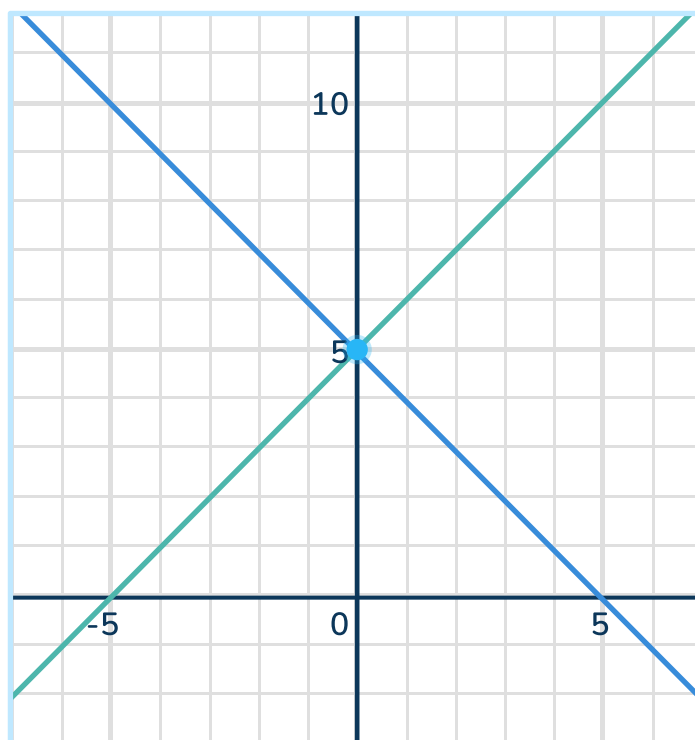
Grades 6 to 8

## Questions

Name: .....

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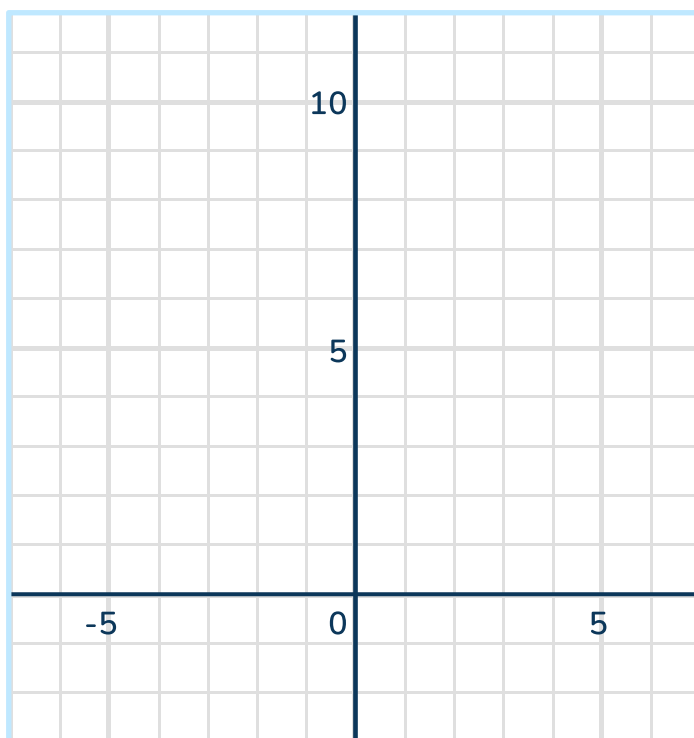
- 1 What is the solution to the system of equations graphed below?



Answer

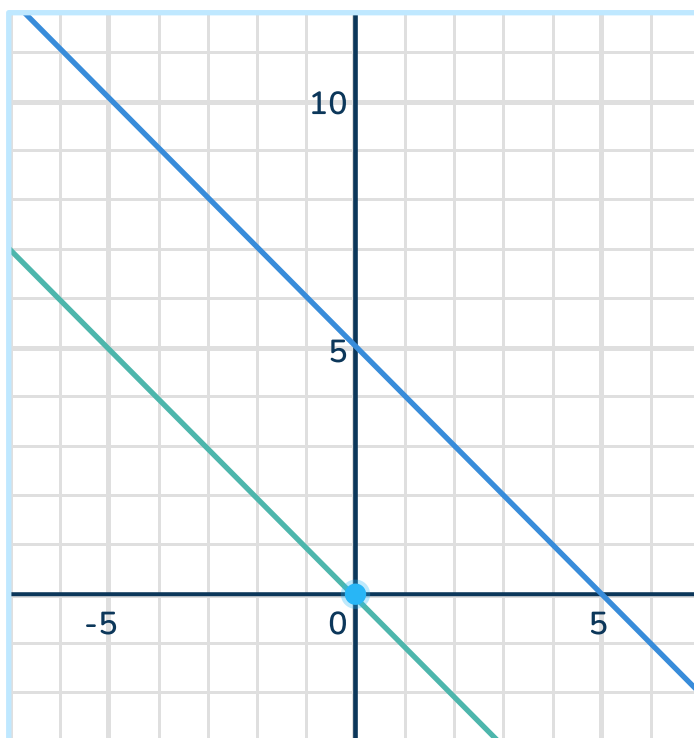
## Solving systems of equations by graphing Worksheet | Grades 6 to 8

- 2 Solve the system by graphing:  $y = 2x - 1$ ,  $y = -x + 5$ .



Answer

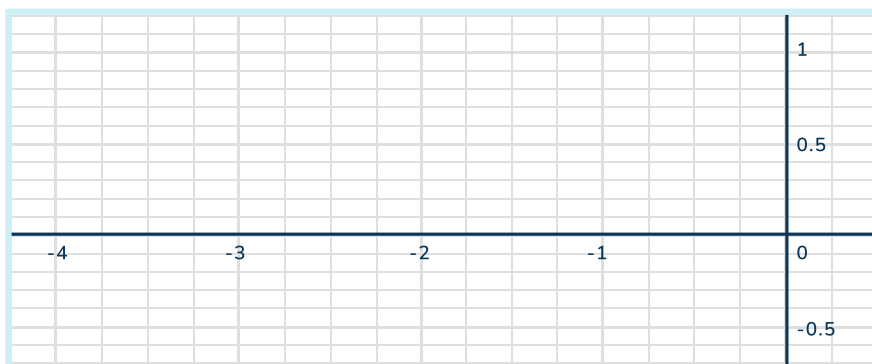
- 3 What is the solution to the system of equations graphed below?



Answer

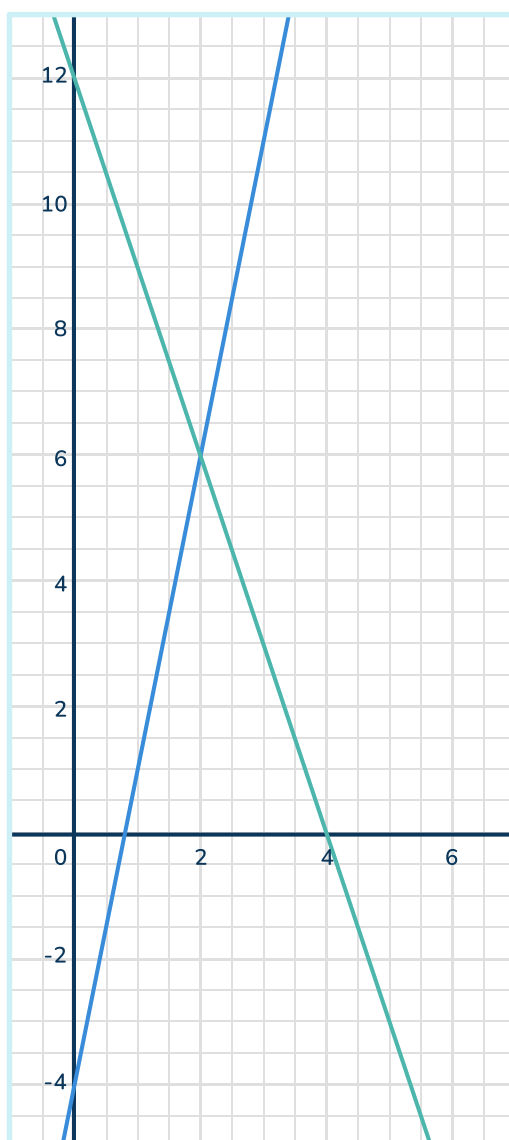
## Solving systems of equations by graphing Worksheet | Grades 6 to 8

- 4 Solve the system by graphing:  $y = x + 3$ ,  $y = -0.5x - 1$ .



Answer

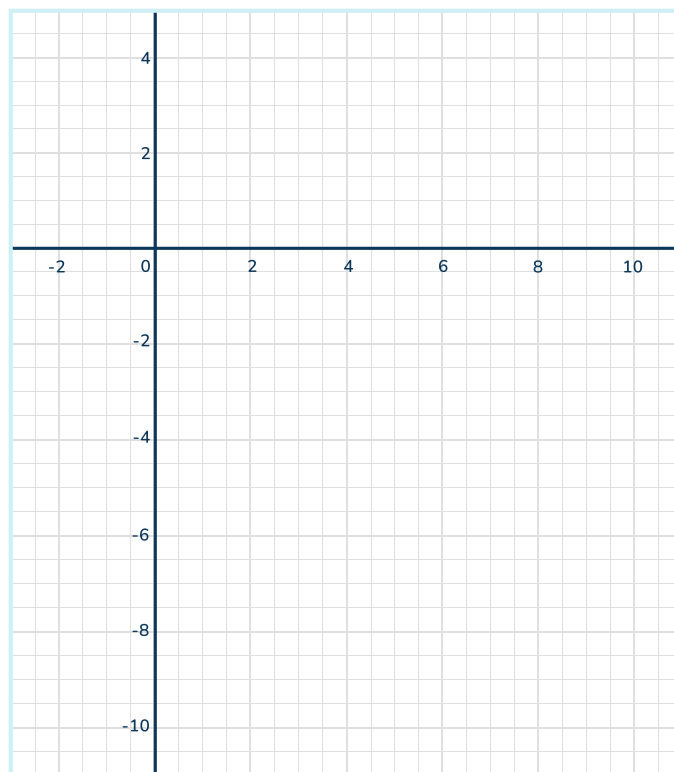
- 5 What is the solution to the system of equations graphed below?



Answer

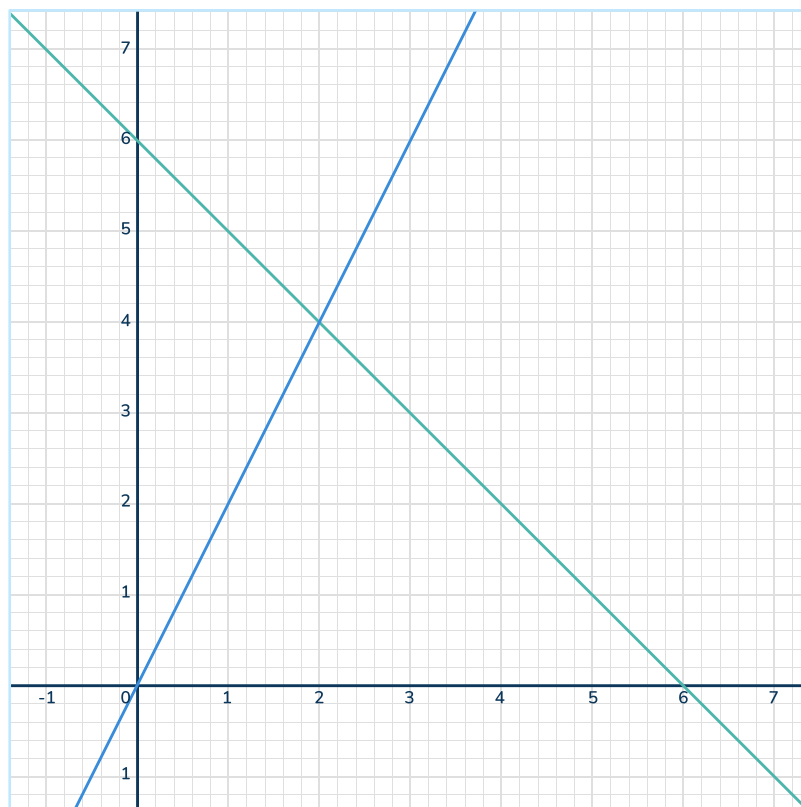
## Solving systems of equations by graphing Worksheet | Grades 6 to 8

6 Solve the system by graphing:  $y = x - 7$ ,  $y = -2x + 2$ .



Answer

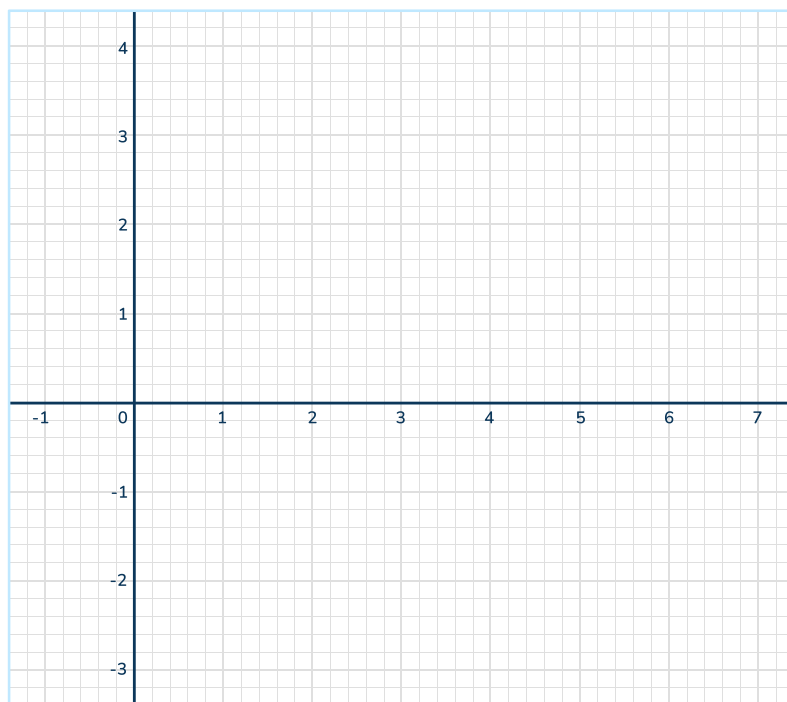
7 Determine the solution of the system of equations that are sketched below.



Answer

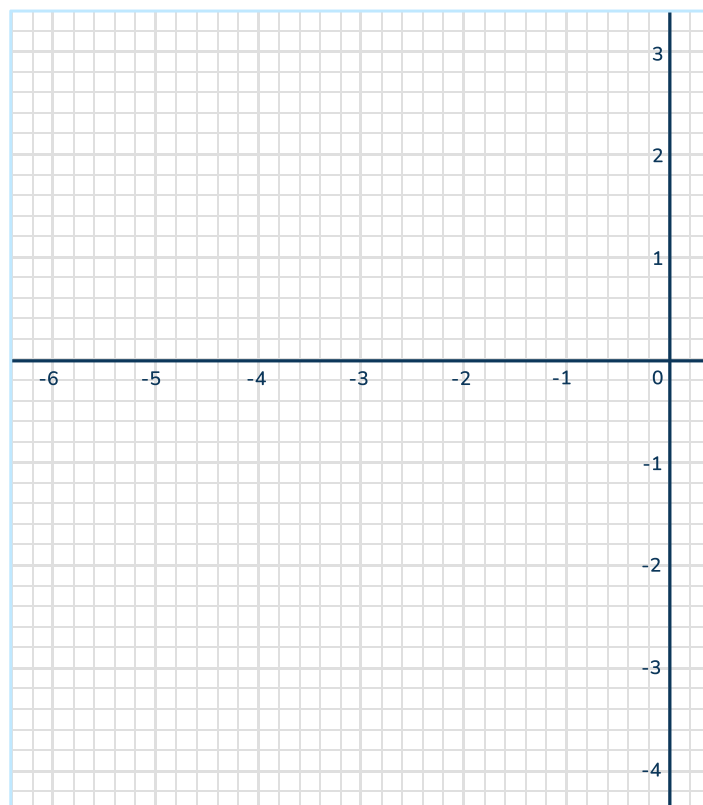
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8 Solve the system by graphing:  $y = -3x + 9$ ,  $y = x - 3$ .



Answer

9 Solve the system by graphing:  $y = 0.5x + 1$ ,  $y = -2x - 4$ .



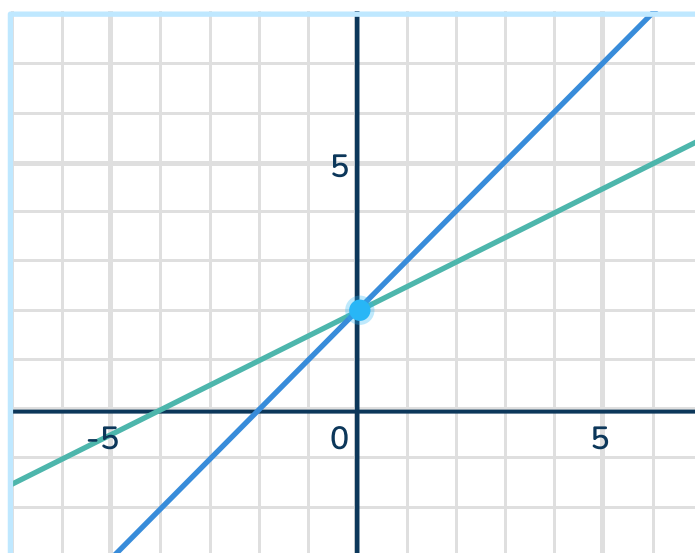
Answer

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- 10 Write a system of linear equations that have  $(0, 0)$  as the solution.

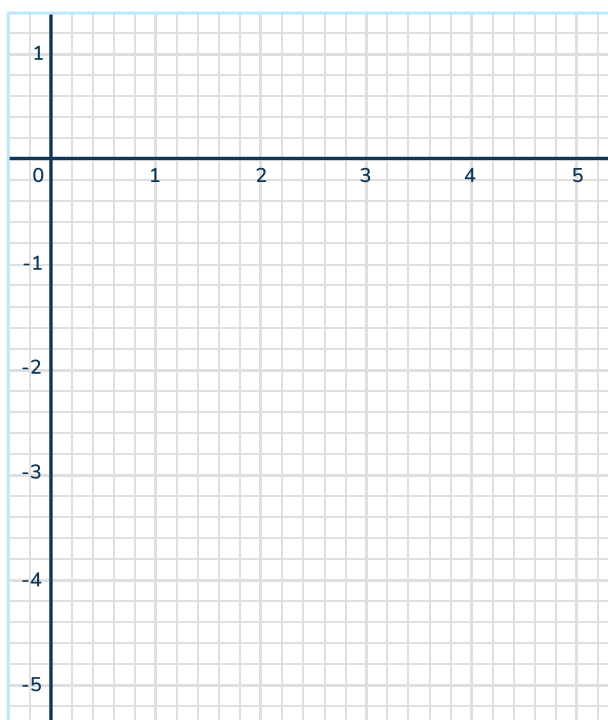
Answer

- 11 Determine the solution to the system of equations sketched below.



Answer

- 12 Solve the system by graphing:  $y = -2x + 1$ ,  $y = x - 5$ .



Answer

## Solving systems of equations by graphing Worksheet | Grades 6 to 8

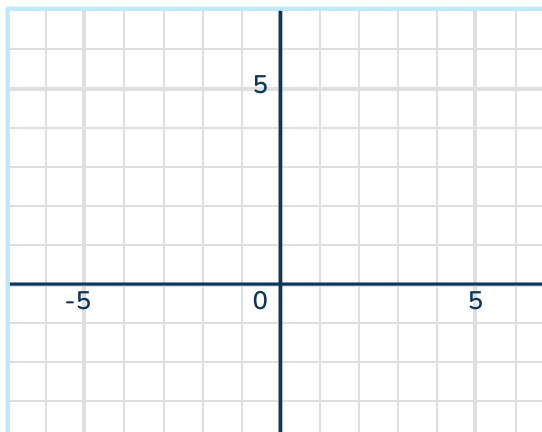
- 13** Explain if the system of equations below has 1 solution, no solutions or infinite solutions.

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

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

Answer

- 14** Solve the system by graphing:  $y = x + 2$ ,  $2y - 2x = 4$ .

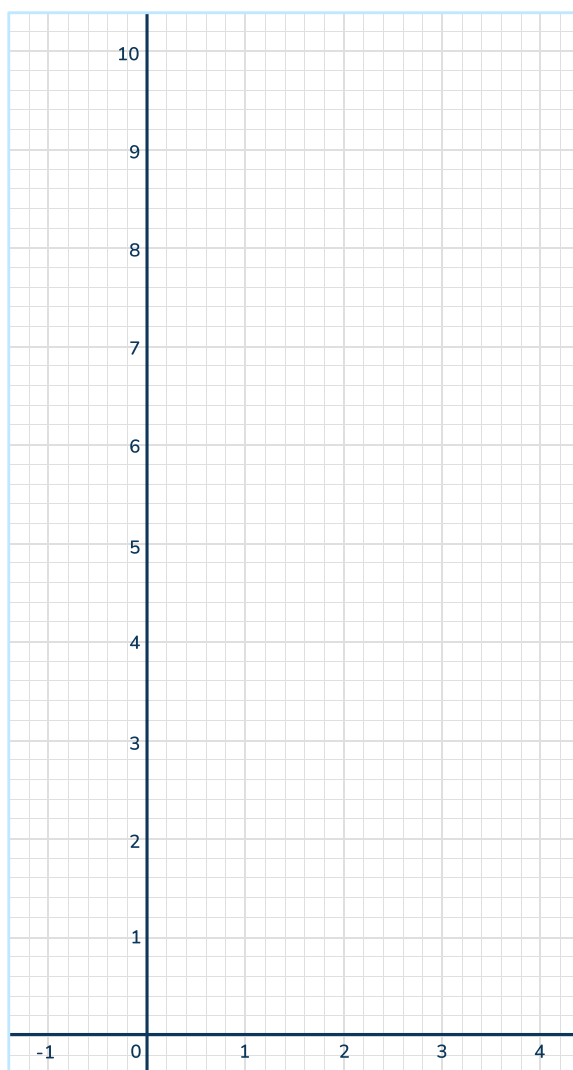


Answer



## Solving systems of equations by graphing Worksheet | Grades 6 to 8

**15** Solve the system by graphing:  $y = 2x + 6$ ,  $y = -3x + 11$ .



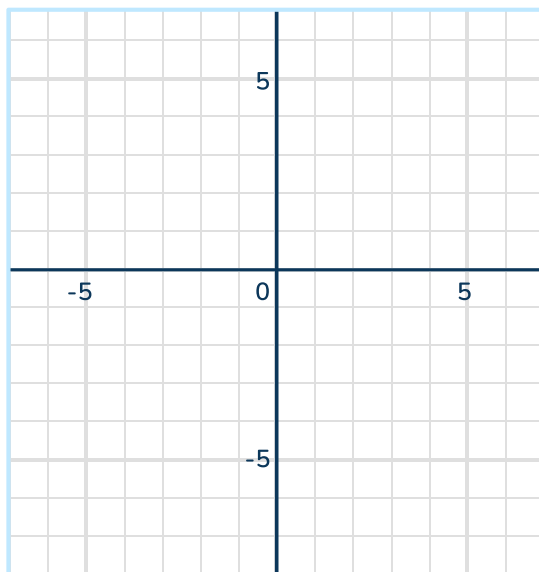
Answer

**16** Create a system of linear equations that have an infinite amount of solutions.

Answer

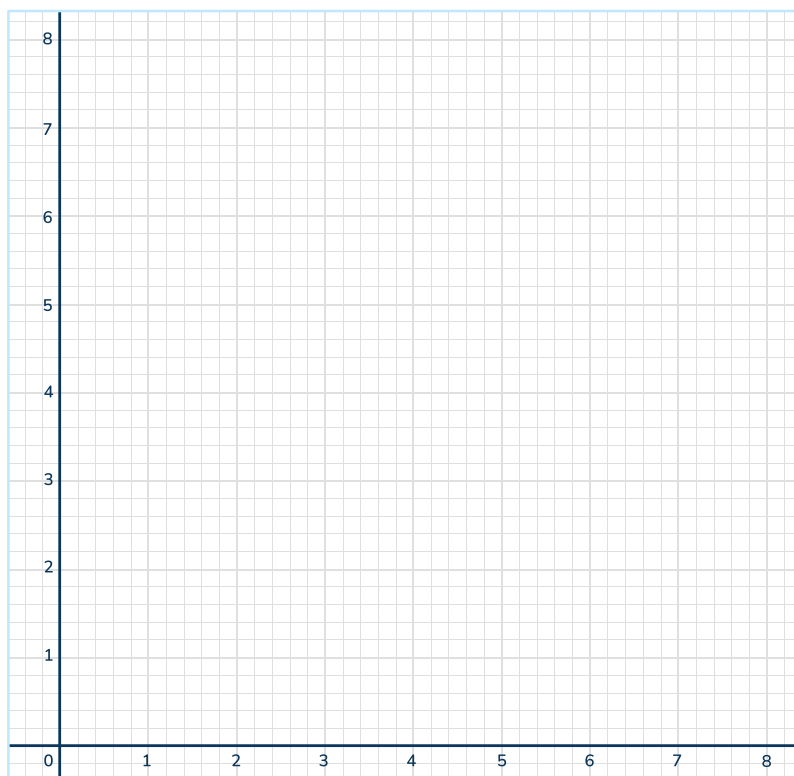
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**17** Solve the system by graphing:  $y = -0.5x - 4$ ,  $y = -0.5x + 2$ .



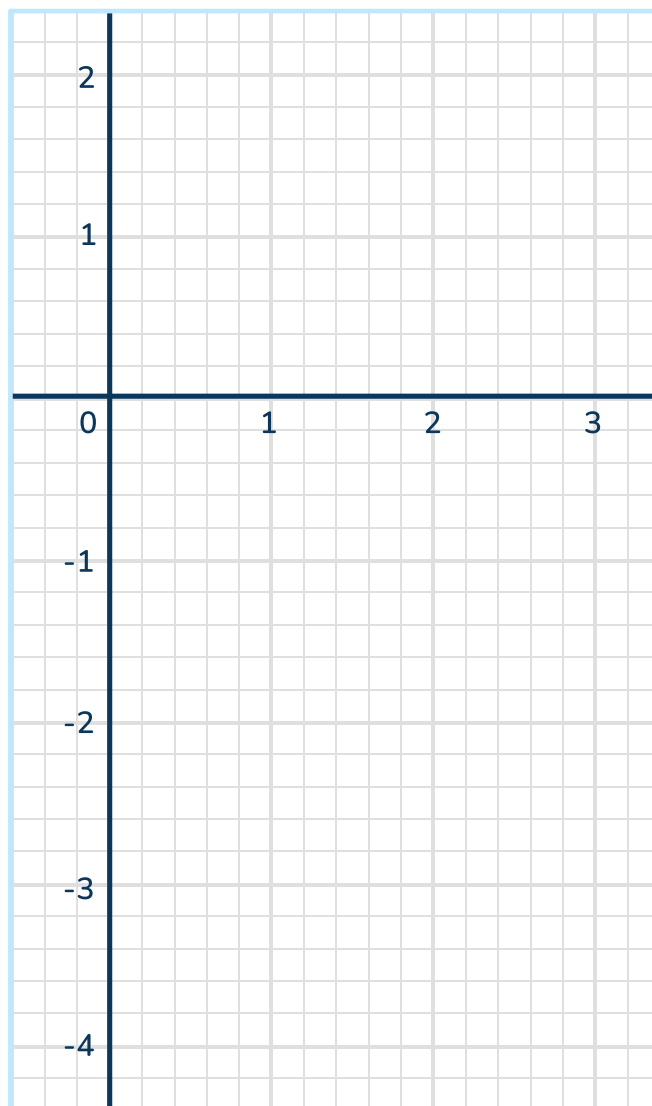
Answer

**18** Solve the system by graphing:  $y - 8 = -x$ ,  $y - 3x + 4 = 0$ .



Answer

**19** Solve the system by graphing:  $y - 5x = -7$ ,  $y + 4x = 2$ .

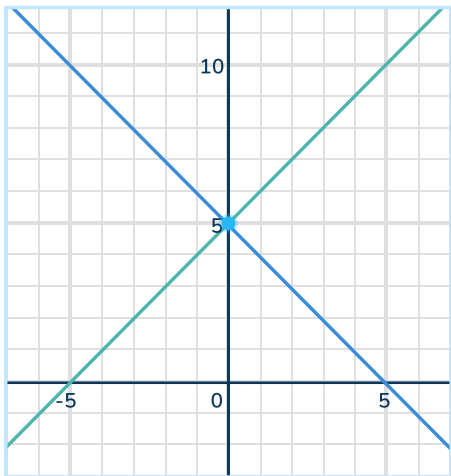
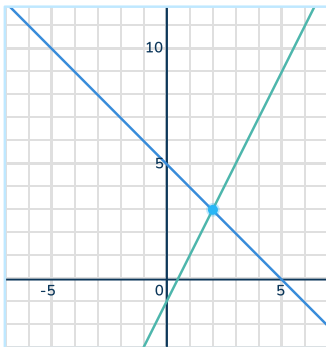
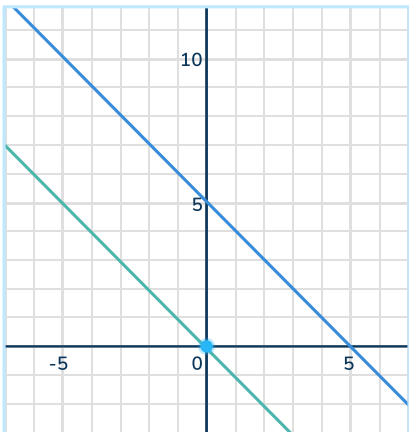


Answer


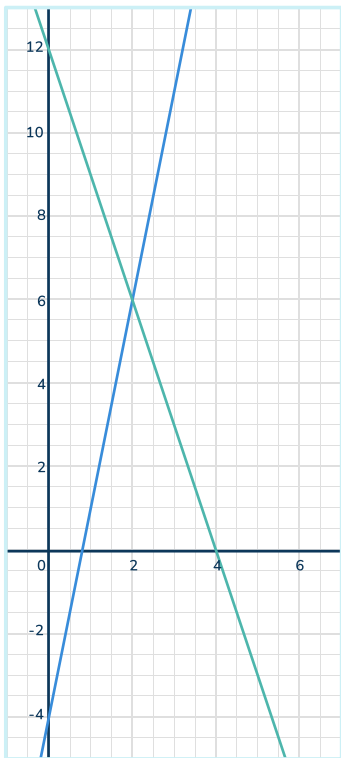
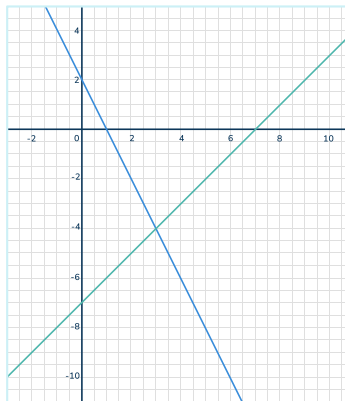
**20** Create a system of linear equations that have no solution.

Answer

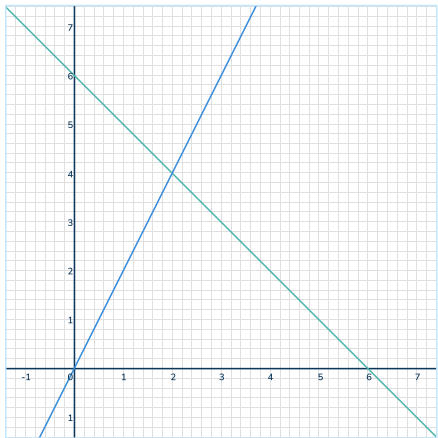
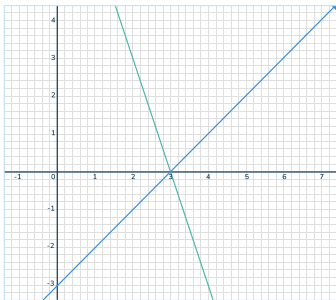
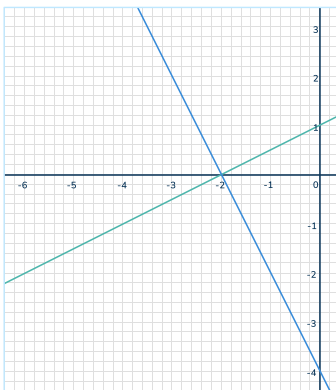
## Answers

Question number	Question	Answers	Standard
1	What is the solution to the system of equations graphed below? 	Solution: (0, 5)	8.EE.C.8a
2	Solve the system by graphing: $y = 2x - 1$ , $y = -x + 5$ .	Solution: (2, 3) 	8.EE.C.8a
3	What is the solution to the system of equations graphed below? 	No Solution	8.EE.C.8a

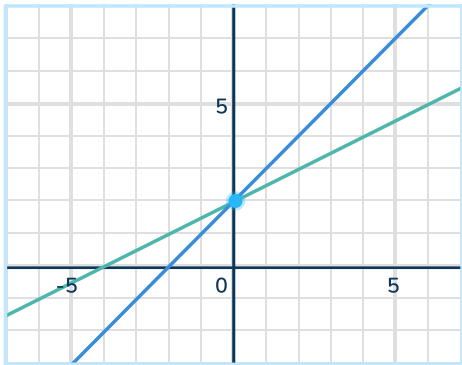
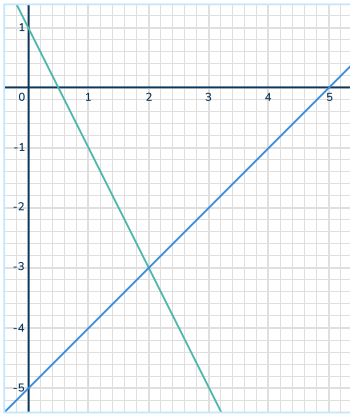
# Solving systems of equations by graphing Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
4	Solve the system by graphing: $y = x + 3$ , $y = -0.5x - 1$ .	Solution: $(-\frac{8}{3}, \frac{1}{3})$ 	8.EE.C.8a
5	What is the solution to the system of equations graphed below? 	Solution: (2,6)	8.EE.C.8a
6	Solve the system by graphing: $y = x - 7$ , $y = -2x + 2$ .	Solution: (3,-4) 	8.EE.C.8a

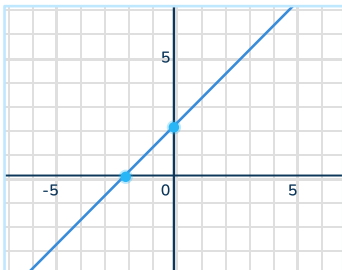
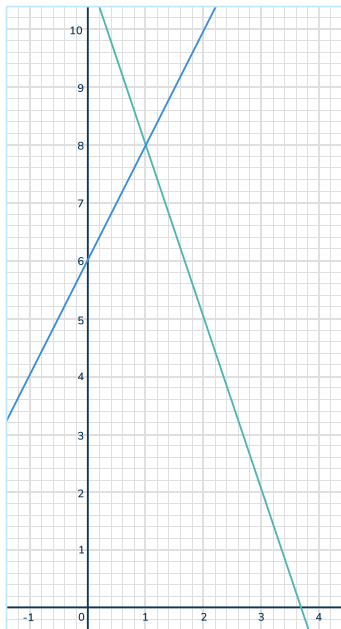
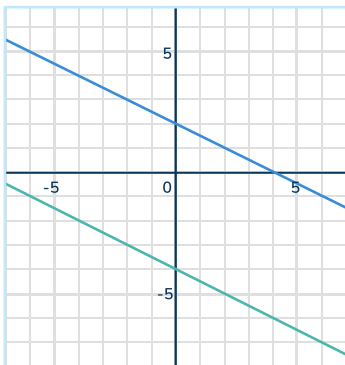
# Solving systems of equations by graphing Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
7	<p>Determine the solution of the system of equations that are sketched below.</p> 	Solution: (2,4)	8.EE.C.8a
8	<p>Solve the system by graphing:  <math>y = -3x + 9</math>, <math>y = x - 3</math>.</p>	<p>Solution: (3,0)</p> 	8.EE.C.8a
9	<p>Solve the system by graphing:  <math>y = 0.5x + 1</math>, <math>y = -2x - 4</math>.</p>	<p>Solution: (-2,0)</p> 	8.EE.C.8a

# Solving systems of equations by graphing Worksheet | Grades 6 to 8 | Answers


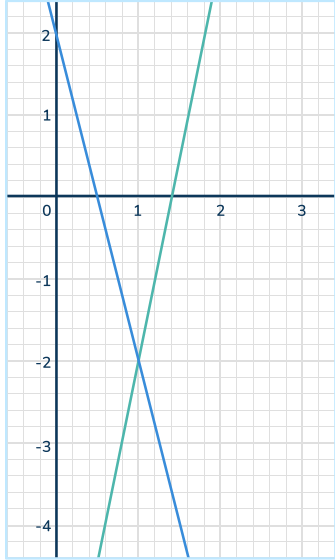
Question number	Question	Answers	Standard
10	Write a system of linear equations that have (0, 0) as the solution.	Answers vary: (point of intersection has to be (0, 0))  $y = -2x$ $y = x$	8.EE.C.8a
11	Determine the solution to the system of equations sketched below.  	Solution: (0, 2)	8.EE.C.8a
12	Solve the system by graphing: $y = -2x + 1$ , $y = x - 5$ .	Solution: (2, -3)  	8.EE.C.8a
13	Explain if the system of equations below has 1 solution, no solutions or infinite solutions.  $\frac{3}{4}y = x - 2$ $y = \frac{1}{2}x$	This system will have one solution because the lines are not parallel and they do not coincide (on top of each other). This means the lines will intersect at one point.	8.EE.C.8a

# Solving systems of equations by graphing Worksheet | Grades 6 to 8 | Answers

Question number	Question	Answers	Standard
14	Solve the system by graphing: $y = x + 2$ , $2y - 2x = 4$ .	Solution: Infinite solutions (same line) 	8.EE.C.8a
15	Solve the system by graphing: $y = 2x + 6$ , $y = -3x + 11$ .	Solution: (1,8) 	8.EE.C.8a
16	Create a system of linear equations that have an infinite amount of solutions.	Answers vary: $y = 2x - 6$ $3y = 6x - 18$	8.EE.C.8a
17	Solve the system by graphing: $y = -0.5x - 4$ , $y = -0.5x + 2$ .	No Solutions 	8.EE.C.8a



# Solving systems of equations by graphing Worksheet | Grades 6 to 8 | Answers




Question number	Question	Answers	Standard
18	Solve the system by graphing: $y - 8 = -x$ , $y - 3x + 4 = 0$ .	Solution: (3,5) 	8.EE.C.8a
19	Solve the system by graphing: $y - 5x = -7$ , $y + 4x = 2$ .	Solution: (1,-2) 	8.EE.C.8a
20	Create a system of linear equations that have no solution.	Answers vary: (look for systems where the slopes are the same)  $y = -3x$ $y = -3x + 1$	8.EE.C.8a

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