

Complete 7.1 Notes (see website for notes) 1/2
 7.1 HW pg.430 #s 1*, 2*, 3-5, 8-10,
For the following: make accurate graphs and check solutions: 14, 15, 17, 22, 23
 WORD PROBLEM(S): #35

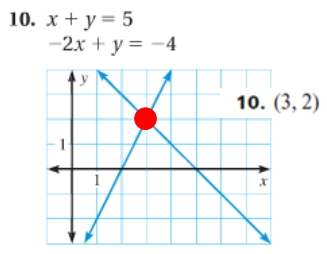
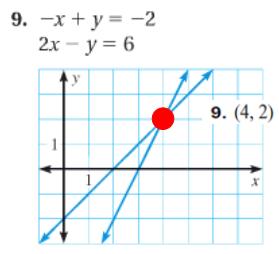
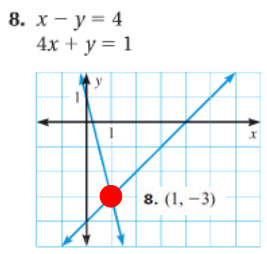
1. **VOCABULARY** Copy and complete: A(n) ? of a system of linear equations in two variables is an ordered pair that satisfies each equation in the system.
2. **★ WRITING** Explain how to use the graph-and-check method to solve a linear system of two equations in two variables.

1. solution
 2. *Sample answer:* Graph both equations and then estimate the point at which the graphs intersect. Then check whether the point is a solution of each equation.

CHECKING SOLUTIONS Tell whether the ordered pair is a solution of the linear system.

- | | | |
|--|---|---|
| 3. $(-3, 1);$
$x + y = -2$
$x + 5y = 2$ S | 4. $(5, 2);$
$2x - 3y = 4$
$2x + 8y = 11$ NS | 5. $(-2, 1);$
$6x + 5y = -7$
$x - 2y = 0$ NS |
|--|---|---|

SOLVING SYSTEMS GRAPHICALLY Use the graph to solve the linear system. Check your solution.



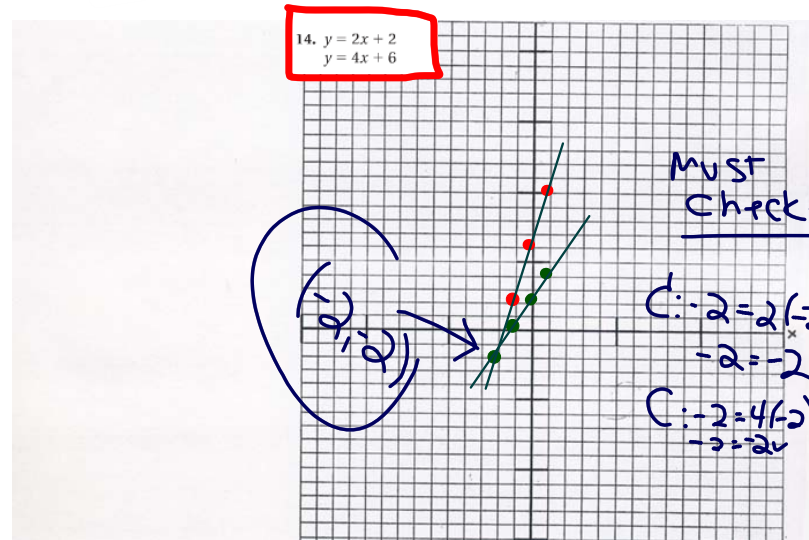
GRAPH-AND-CHECK METHOD Solve the linear system by graphing. Check your solution.

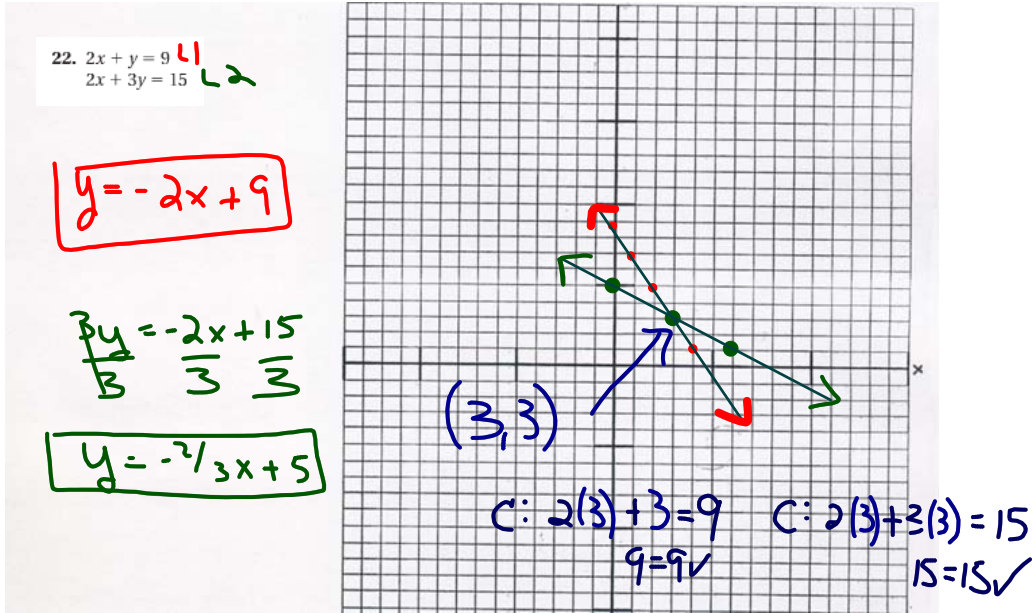
15. $x - y = 2$
 $x + y = -8$

14. $y = 2x + 2$
 $y = 4x + 6$
 17. $3x + y = 15$
 $y = -15$

22. $2x + y = 9$
 $2x + 3y = 15$

23. $-5x + 3y = 3$
 $4x + 3y = 30$





HW:

35. **MULTIPLE REPRESENTATIONS** It costs \$15 for a yearly membership to a movie club at a movie theater. A movie ticket costs \$5 for club members and \$8 for nonmembers.

a. **Writing a System of Equations** Write a system of equations that you can use to find the number x of movies viewed after which the total cost y for a club member, including the membership fee, is the same as the cost for a nonmember.

b. **Making a Table** Make a table of values that shows the total cost for a club member and a nonmember after paying to see 1, 2, 3, 4, 5, and 6 movies.

c. **Drawing a Graph** Use the table to graph the system of equations. Under what circumstances does it make sense to become a movie club member? *Explain* your answer by using the graph.

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Key Info:

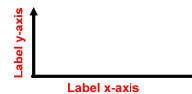
Define variables:

Define equations:

Solve:

- In this example: Create a table and graph.

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ANSWER: in a complete sentence-

HW:

35. **MULTIPLE REPRESENTATIONS** It costs \$15 for a yearly membership to a movie club at a movie theater. A movie ticket costs \$5 for club members and \$8 for nonmembers.

- a. **Writing a System of Equations** Write a system of equations that you can use to find the number x of movies viewed after which the total cost y for a club member, including the membership fee, is the same as the cost for a nonmember.
- b. **Making a Table** Make a table of values that shows the total cost for a club member and a nonmember after paying to see 1, 2, 3, 4, 5, and 6 movies.
- c. **Drawing a Graph** Use the table to graph the system of equations. Under what circumstances does it make sense to become a movie club member? Explain your answer by using the graph.

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Key Info:

\$15/yr MEMBERSHIP
 \$5/TIX MEMBER
 \$8/TIX NON MEMBER

Define variables:

$X = \#$ MOVIES
 $Y = \text{TOTAL COST } \$$

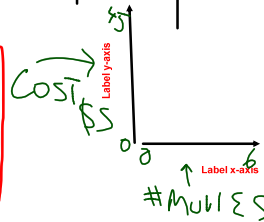
Define equations:

m: $Y = 5X + 15$

nm: $Y = 8X$

Solve:
 • In this example: Create a table and graph.

MOVIES	MEM \$	NONM \$
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ANSWER: in a complete sentence.

Graph paper pdf - Adobe Acrobat Pro

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103% Create

Find

7.1 pg 432 # 35

KEY INFO:
 \$15/yr membership
 \$5/ticket CLUB MEMBER
 \$8/ticket NON MEMBER

TICKETS	Member	NON MEMBER
1	\$20	\$8
2	\$25	\$16
3	\$30	\$24
4	\$35	\$32
5	\$40	\$40
6	\$45	\$48

$X = \#$ MOVIES
 $Y = \text{TOTAL COST } \$$

MEMBERS + NON-MEMBERS PAY THE SAME TO GO TO 5 MOVIES. BECOME A MEMBER IF YOU GO TO 6 OR MORE MOVIES.